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The Sri Lankan Journal of Banking and Finance (SLJBF) is a referred Journal bi-annually published research papers and scholarly work by the Department of Banking and Finance, Wayamba University of Sri Lanka. The main objective of the SLJBF is to publish scientific research findings that address issues and developments related to economics in general and money, banking, financial markets in particular at both national and international level. All research articles submitted are double blind reviewed prior to publishing. Views expressed in the research articles are not the views of the Department of Banking and Finance, Wayamba University of Sri Lanka or the Editorial Board.

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Tel: +94 37 228 4216
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Editorial Preface

We are pleased to present Volume 6(2) of the Sri Lankan Journal of Banking and Finance (SLJBF), a refereed journal of Banking and Finance published by the Department of Banking and Finance, Wayamba University of Sri Lanka. SLJBF provides a unique platform for researchers, academicians, professionals, and research students to impart and share knowledge in the form of high-quality research papers to infuse innovative systems and methods to the economy and finance as a whole. In line with that SLJBF invites you to join with us by writing quality manuscripts in the discipline of economics, banking and finance.

We received a good response for the call for papers and out of the paper received seven papers selected for the publication through the rigorous blind review process. We wish to thank all the authors who contributed to this issue by submitting their novel research findings. The volume 6(2) of SLJBF deals with timely important topics, online community engagement and experience and value creation, moderating effect of board independence on the determinants of financial performance in listed non-financial companies of Colombo stock exchange, impact of bank specific and macroeconomic factors on profitability of commercial banks in Sri Lanka, microfinance on women empowerment, monetary policy framework and its impact on the financial sector, relationship between FDI and interest rate in Sri Lanka, evaluation of entrepreneurial intention of Sri Lankan youth generation. Thus, the journal has widened its scope to appeal to a wider readership with varied interest and needs.

On this occasion, I would like to extend my sincere thanks to the dedicated panel of distinguished reviewers, members of the editorial advisory board, members of the editorial board and the assistant editors for their unstinting and voluntary contribution to make this issue a success. The continued support of the governing body of the Wayamba University of Sri Lanka in this endeavor is also acknowledged.

Prof. R.A Rathanasiri
Editor in Chief
Sri Lankan Journal of Banking and Finance
Department of Banking and Finance, Wayamba University of Sri Lanka

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Aims and Scope

The Sri Lankan Journal of Banking and Finance (SLJBF) is a refereed Journal bi-annually published research papers and scholarly work by the Department of Banking and Finance, Wayamba University of Sri Lanka. Sri Lankan Journal of Banking and Finance (SLJBF) publishes theoretical and empirical papers spanning all the major research fields in economics, banking and finance The aim of the SLJBF is to bringing the gap existing in the theory and practice of Economics, Banking and Finance by encouraging researchers, academicians, professionals, and research students to impart and share knowledge in the form of high quality research papers to infuse innovative system and methods to the economic and financial system as a whole. Thus, the journal's emphasis is on theoretical and empirical developments and policy-oriented research in economics, banking and finance.

Core Principles

- Publication in the journal of banking and finance is based upon the editorial criteria cited and the evaluation of the reviewers (each manuscript will be sent two reviewers);
- Priority is given for novelty, originality, and to the extent of contribution that would make to the particular field.
- Conceptual papers based upon current theory and empirical findings and contribute to the development of theory in the domain of Banking and Economics are also welcome.

The journal welcomes and publishes original articles, literature review articles and perspectives and book reviews describing original research in the fields of economics, banking and finance. The core focus areas of the journal include;

- Financial Intermediation
- Bank Solvency and Capital Structure
- Banking Efficiency
- Bank Failure and Financial crisis
- Behavioral Finance
- Corporate Finance
- Corporate Governance and Ethics
- Credit Rating

- Derivative Pricing and Hedging
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DOES ONLINE COMMUNITY ENGAGEMENT AND ONLINE COMMUNITY EXPERIENCE PLAY A ROLE IN VALUE CO-CREATION AT JENIUS BTPN BANK?

P Naomi
N Cahyati

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Abstract

Jenius BTPN is one of the many digital banking resources in Indonesia. This study investigates the effect of online community experience and online community engagement on value co-creation at Jenius BTPN Bank. The sample for this research comprises Jenius customers who join the Jenius online community and follow Jenius BTPN on Instagram @jeniusconect. The number of respondents in this study was 101, and data collection used online questionnaires. Data analysis was performed using regression and path analysis. The results of this study indicate that Jenius's co-creation is still in the idea-creation stage of value co-creation within the progression levels of ideas, brand advertisement, and products. Testing for this study's hypothesis reveals that: 1) Online community experience and online community engagement variables have a significant effect on value co-creation, and 2) Online community engagement strengthens the influence of online community experience on value co-creation.

Keywords: Online Community, Community Experience, Engagement, Value Co-creation, Indonesia

P Naomi
(Corresponding Author)
Department of Magister Management, Universitas Paramadina, Indonesia
Email: prima.naomi@paramadina.ac.id
https://orcid.org/0000-0001-8658-8308

N Cahyati
Department of Magister Management, Universitas Paramadina, Indonesia
Email: v-niki.cahyati@btpn.com

1. INTRODUCTION

Indonesia houses the 4th largest population in the world after China, India, and the United States. Based on data from Hootsuite (Hootsuite, 2021), in light of Indonesia's population of 274.9 million, the country's Internet users' number is 202.6 million, which represents a user penetration of 73.7%. Mobile phone accounts number 345.3 million, which represents 125.6% of the population. This large number of Internet users in Indonesia can indirectly encourage progress within the digital economy in Indonesia. One way this happens is through the financial industry in the form of financial technology (fintech). FinTech is a financial service that helps business models become more modern, whereas previous financial transactions involving a certain amount of cash had to be conducted face-to-face. Using fintech, transactions can be made remotely and at a faster pace (Bank Indonesia, 2020). Fintech in Indonesia is growing rapidly, with nominal transactions increasing by 29.16% in 2020. This growth introduces a threat to the banking industry, requiring banks to undergo digital transformation.

Jenius BTPN is one of the many digital banking resources available today. Jenius, owned by bank BTPN, is also a pioneer in digital banking. Jenius is designed to help and develop people in managing their life finances through smartphones based on Android and iOS. Jenius BTPN is a digital banking company in Indonesia that continues to experience improvement and competition. In order to maintain the quality service and trust in Jenius BTPN, it is necessary to conduct research aimed at exploring and re-analyzing the SWOT of Jenius BTPN. One of the studies was conducted by utilizing online community co-creation. Jenius BTPN is one of the digital banking institutions that implements co-creation in Indonesia, namely Jenius cocreate.id

Today, co-creation is considered an effective communication tool for businesses to reach customers. Building co-creation in a community can generate value co-creation. However, the level of success and effectiveness in the formation of value co-creation is highly dependent on the activities of the community. Jenius engages in co-creation through various activities such as blogs, discussion forums, and special event information for cocreate.id members. The co-creation values that have been formed through the Jenius cocreate.id are expected to support the co-creation process. However, no research has been conducted to study this assertion.

Innovative new product development through customer engagement or customers as co-creators can bring ideas that are more creative, appreciated by customers, and easy to implement (Kristensson, Matthing, & Johansson, 2008). By providing a community platform for both active and passive customers, the company forms the process of co-creation promotes community participation both emotionally and intellectually and triggers the emergence of greater innovation (Kristiadi, Hartoyo, Yusuf, & Sukandar, 2014). Increased co-creation indirectly through customer engagement, customer loyalty, and interaction between customers and the company can have a positive long-term effect when compared to co-creation with weak customer engagement.

Prahalad and Ramaswamy (2004) stated a company can achieve innovative co-creation with customers if it provides a diverse consumer group and involves them emotionally and intellectually. Thus, the customer experience does affect value co-creation.

This research aims to :1) investigate the influence of online community experience on value co-creation, 2) investigate the influence of online community experience on online community engagement, 3) investigate the influence of online community engagement on the formation of value co-creation, and 4) analyze the influence of the online community experience on the formation of value co-creation through the online community engagement variable. This paper is structured as follows. The first section provides literature review of the variables examined and the relationships among them as well as the hypothesis. Research methods are then presented. Finally, we discuss the results and present the conclusion as well as our suggestions and limitations.

2. LITERATURE REVIEW

Digital marketing is a modern marketing concept that is popular in the era of new technology. Digital marketing uses digital technology to create new networks to reach customers with the aim of achieving company goals by satisfying consumer needs with increasing efficiency (Sawicki, 2016). Technological developments and evolution in the field of marketing are closely related, in which technology is the main aspect in the history of marketing (Ryan & Jones, 2009). Digital marketing enables people who deal with these issues to select customers in a more precise way than ever before. Therefore, the product/service can be more closely tailored to the reference or the needs of each individual (Sawicki, 2016).

Vargo & Lusch (2004) introduce a new dominant logic that differs from the commodity/good's dominant logic. The main principle of dominant logic states that service is the fundamental basis of exchange. Service dominant logic is an exchange between services that are the basic focus of the exchange. Special skills and knowledge in the exchange process are required from each party who expects to benefit from such a transaction. The development of a better value proposition is more important than feedback on financial performance from the market, and a service-focused marketing vision sees marketing as a continuous learning process. This shows that the process is not only customer-oriented, but also creates collaboration customer learning and adaptation to personal needs and customer dynamics.

The customer model applied in service-dominant logic is a marketing model that sets the customer as an internal part of the company. Service dominant logic calls firms to do something better, an approach also known as customer centricity and customer response. Under this logic, services are defined as implementing capabilities through actions, processes, and performance that benefit other entities and the entities themselves. This increases the company's ability to meet customer needs to achieve social and organizational goals. Thus, the company competes through service. Competition through services is not just a value-added product activity. Effective

competition through services must be carried out through the perspectives and methods within all parts of the organization, thus seeking to generate satisfaction among consumers.

2.1 Online Community Experience

The term online community broadly refers to any community that has an online presence. Furthermore, online success is determined by usability, community, and the influence a company has on people's interactions within the community (Preece, Abras, & Krichmar, 2004). Online communities have varied goals, supported by technology and guided by policy, and those that support discussion and professionals are referred to as communities of practice. Communities in which users can find interest groups relating to dog ownership, gardening, football, bridges, and book discussions, among others, are often called interest communities.

The existence of the community itself is already numerous and quickly growing. This development is based on curiosity about their choice and desire for further detail. The consumer community that is engaged today is often called a brand community. The development of the Internet and social media has removed the boundaries of regional coverage. The concept of the online community experience (OCE) develops the dimensions of the success of online communities in developing interactive experiences for online community members. The OCE was developed with the aim of understanding community participation in shaping an attitude toward the company's products and brands. Yaitu (Nambisan, 2005) outlines four dimensions of the OCE: 1) pragmatic, 2) hedonic, 3) usability, and 4) sociability.

2.2 Online Community Engagement

Community engagement is a psychological state that arises based on an interactive customer experience with a company or brand. The results of community engagement include customer loyalty and satisfaction with the brand and community, thereby empowering trust in and commitment to other members of the community. The creation of shared value does not require a transaction, but actors can exchange resources beyond goods and money. The value of the resources exchanged is determined by individuals and is influenced by their suitability with unique value processes, individual goals, and relational, collective, and social contexts and systems. (Jaakkola & Alexander, 2014).

Consumer participation, or consumer engagement, is defined as the contribution of consumers to browsing content or online community websites. The greater the opportunity to create shared value, the more opportunity and value an online community website can bring to companies and consumers (Vivek, 2009). Consumer engagement is measured using the following dimensions: 1) enthusiasm, 2) consciousness, and 3) social interaction. Positive experiences in consumers' online communities can shape their attitudes toward brands and companies. Customers' perceptions of their interactive experiences in a community contribute to those attitudes. Customer involvement in brand co-creation can improve brand

relationships as well as consumer relationships (Kristiadi, Hartoyo, Yusuf, & Sukandar, 2014).

Consumer interaction and participation online create mutually beneficial value for businesses and consumers. The creation of shared value or the co-creation of value is defined as the benefits that are shared from the results of engagement and interaction that are formed in online community sites.

The effect of consumer involvement can generate useful value from the relationship formed between consumers and companies. Consumer interaction and participation on the online web create mutually beneficial value for businesses and consumers. The creation of shared value or called co-creation of value is defined as the benefits that are shared from the results of engagement and interaction that are formed in online community sites.

2.3 Value Co-creation

Co-creation is creating of shared value between companies and customers, through which customers leave their traditional roles and become consumers who have value (Prahalad & Ramaswamy, 2004). High-quality interactions that allow individual customers to co-create a unique experience with the company are essential to unlocking superior and competitive innovation or ideas (Hatch & Schultz, 2010). The value of co-creation from customer to customer is formed in a community that has a shared goal and builds a sense of solidarity. In the community, those who are experienced can share knowledge with those who are less experienced, and the presence of the internet, social media platforms, and e-commerce greatly supports the role of reciprocal customers.

Great quality results created with customers usually depend on frequency, direction, and content. This shows that companies can improve the results of development projects by spending a lot of time communicating with customers. This community must be democratic; that is, communication must occur between two parties with equal strength and must focus on certain types of content in the communication process (Gustafsson, Kristensso, & Witell, 2012).

Co-creation is like a ladder; the higher the co-creation level, the more valuable the co-creation result is. The first form of participation in this co-creation is participating in assessing, commenting on, and discussing the company's products. The next higher level of value co-creation is the creation of ideas, brand advertisements, and products. Among these levels, product creation is the highest level of co-creation (Smith & Zook, 2011).

Co-creation of value is mutually beneficial to both parties, i.e., companies and consumers. The value generated by consumer participation, both internal and external, is reflected in their behavior. These values can be measured based on: 1) connection with the company, 2) goodwill, 3) intent to do business, and 4) affective commitment. Based on the literature review above, we propose four hypotheses in Table 1.

Table 1: Hypotheses

Hypothesis	Reference
H_1: The online community experience does not significantly influences value co-creation.	Prahalad & Ramaswamy (2004) believe that innovation can be created with customers using the facilities provided by the company by attracting a diverse group of consumers and involving them emotionally and intellectually.
H_2: The online community experience does not have a significant effect on online community engagement.	Vivek (2009) supports the importance of a consumer experience in influencing consumer engagement.
H_3: Online community engagement dos not significantly influences value co-creation.	Vivek (2009) states that the level of customer involvement has a positive relationship with the value received by customers.
H_4 : The online community experience dos not significantly influence value co-creation through online community engagement.	Vivek (2009) found that high consumer involvement in the community will provide greater co-create value opportunities and will further increase the value of the community site.

3. METHODOLOGY

The object of this research is Jenius BTPN, and the research subject is a member of the online genius community of BTPN. The population of co-create members is currently 30,000 creators, and we use non-probability sampling by setting a minimum sample quota of 100 respondents. Finally, we received responses from 101 co-creation members for the respondents of this research. We collect data through surveys by distributing online questionnaires scored on a Likert scale.

In this study, the independent variable is the online community experience, the dependent variable is value co-creation, and the intervening variable is online community engagement. Table 2 explains the operational definition of each variable. All of the measurements use the Likert scale.

Table 2: The Variable, Dimension, and its Definition

No	Variable	Dimension	Definition
1	Value Co-creation	Connection with the Company	It is an emotional bond between the consumer and the company, whereby the consumer maintains active, frequent, timely, and accurate communication with the business. Active consumers build strong relationships with companies.
		Goodwill	A form of feeling of support, interest, or attention is obtained by giving something.
		Intent toward the Business	The attitude toward engaging with a business and building or maintaining an existing business relationship with the company.
		Affective Commitment	A psychological attachment that motivates consumers to establish a relationship with the company because it is their wishes.
2.	Online Community Experience	Pragmatic	There are practical and utilitarian values obtained through interactions in a community. For example, members can learn more about the product or various aspects of the product.
		hedonis	The pleasure or happiness that customers get by interacting with the community. Aspects in the hedonic dimension include aspects of consumer behavior and are related to the other five senses, such as visuals and emotions, that can stimulate feelings of happiness and pleasure.
		Usability	Values related to the convenience that customers or members get by interacting with computers/telephones in online communities
		Sociability	The existence of values that describe interpersonal relationships that are provided and supported by their interactions in the online community.
3	Online Community Engagement	Enthusiasm	The pleasure of being involved and taking part in nurturing the community shows high enthusiasm for producing innovations.
		Social interaction	The exchange of ideas, thoughts, or feelings among consumers about participation and focus on involvement.
		Conscious participation	Awareness to participate, includes aspects of awareness of activities and the value of caring which is defined by a pattern of interaction.

The collected data is tested for validity and reliability, then to test our hypothesis we use linear regression and path analysis.

4. RESULT AND DISCUSSION

4.1 Descriptive Analysis

Figure 1. shows descriptive statistics of our sample in terms of gender, age, occupation, and education. Within our study, 54% of the sample were male and 46% female. Most (43%) were aged 23-37 years, followed by 36% aged 28-32 years, and the rest were divided into other age categories. Based on occupation, the majority of respondents (76%) are private employees, and the rest are evenly distributed into the categories of entrepreneurs, students, and others. The majority of respondents' education levels in this study (68%) were undergraduate, followed by diploma, high school, and postgraduate.

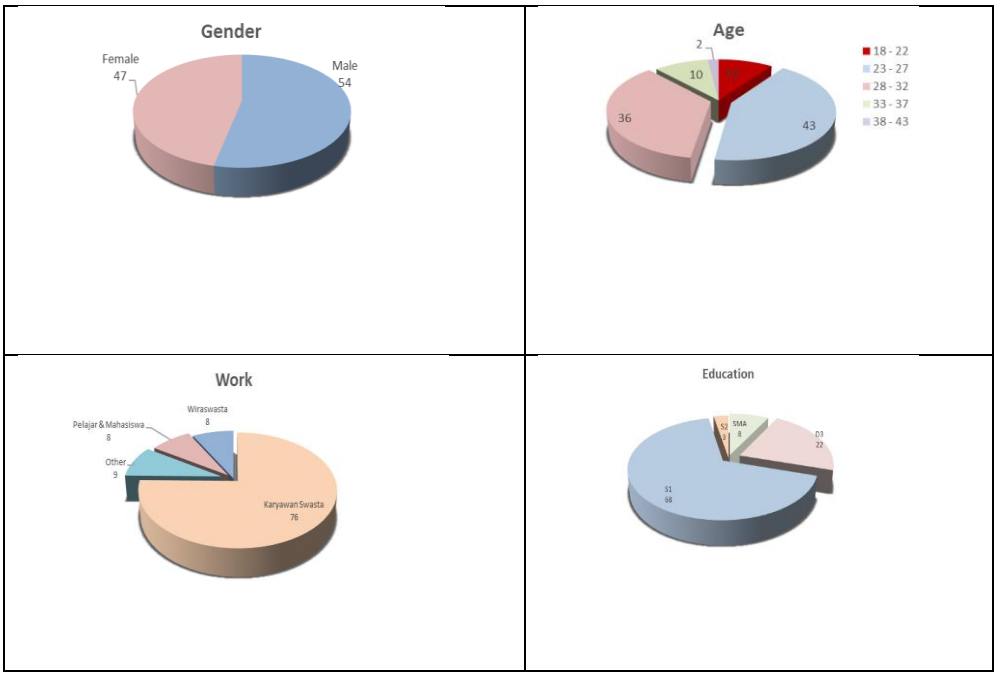

Figure 1: Descriptive Statistics

Figure 2 demonstrates that the pragmatic dimension has the highest average value of 3.55. The pragmatic dimension shows that customers get something through interactions between community members, both to find out more about a product and other related matters. This shows that consumer members expect aspects related to the pragmatic values of the usefulness of the community, meaning that customers are more judgmental in terms of what can be obtained by joining a community, which involves expecting benefits received by members. The types of questions gauging pragmatic value are "Joining the Jenius community adds a lot of information about Jenius" and "Joining the Jenius community increases my knowledge in the field of finance." Respondents on average scored high on both of these questions, indicating that joining the community provides knowledge about genius and other related matters, especially in financial and other matters. In addition to the pragmatic value, high hedonic value indicates that the community is looking for things that can provide pleasure. Meanwhile, the sociability dimension got the lowest average, with a value

of 2.95. As we know the sociability dimension is more about interpersonal relationships between members, these results show that this close relationship is not so strong.

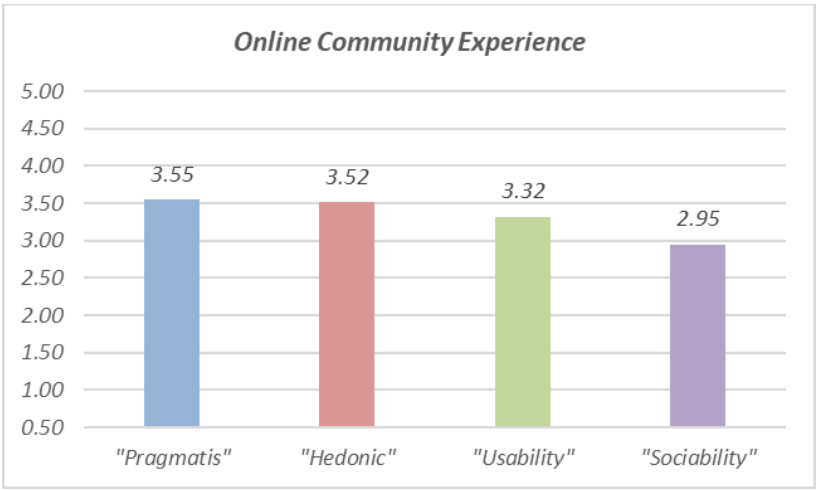

Figure 2.a: Descriptive statistics of Variable Online Community Experiences

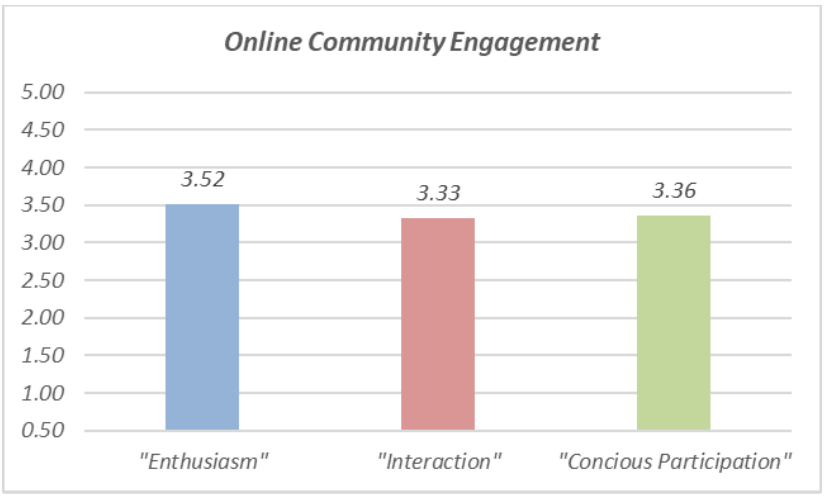

Figure 2.b: Descriptive statistics of Online Community Engagement

Figure 2 demonstrates that the pragmatic dimension has the highest average value of 3.55. The pragmatic dimension shows that customers get something through interactions between community members, both to find out more about a product and other related matters. This shows that consumer members expect aspects related to the pragmatic values of the usefulness of the community, meaning that customers are more judgmental in terms of what can be obtained by joining a community, which involves expecting benefits received by members. The types of questions gauging pragmatic value are "Joining the Jenius community adds a lot of information about

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These results are in line with previous studies which conclude that the formation of value co-creation in online communities is indicated by the formation of experiences gained, especially regarding hedonic experiences (Kristiadi, Hartoyo, Yusuf, & Sukandar, 2014). In this study, pragmatic and hedonic dimensions contribute a greater influence on the formation of value co-creation. To maintain and strengthen the pragmatic dimension, namely by providing more value that can be obtained from members by joining the community, it can motivate a high co-creation value attitude to increase the level of co-creation. For example, if you join a community and are active within it, you can gain knowledge about Jenius products, not only in the financial sector but also in other areas.

Within the online community engagement variable, the conscious participation dimension has the highest average value of 3.36. The conscious participation dimension shows that there is awareness among members to participate in an online community, while the social interaction dimension got the lowest average with a value of 3.33. As we know, the social interaction dimension shows the sharing of ideas, thoughts, and feelings between consumers about participation and focus on involvement.

Value co-creation is a Y2 variable (endogenous dependent variable) through which value co-creation is mutually beneficial to both companies and consumers. Values resulting from consumer involvement, both intrinsic and extrinsic, are reflected in their behavior, and these values can be measured through connection with the company, goodwill, intent to do business, and affective commitment. Based on Figure 3, we know that the goodwill dimension has the largest average value, at 3.97. The goodwill dimension shows forms of feelings of support, interest, and attention that are seen by giving something. Value in the intent to the business dimension and affective commitment indicated a fairly good average value, showing a business tendency toward consumer attitudes to build a business with the company or maintain an existing business relationship with the company, as formed in the Jenius community. Meanwhile, the connection with the company dimension is in the lowest position with an average of 3.18. Connection with the company shows the consumer's emotional bond with a company, such as feeling comfortable and willing to maintain communication with companies in a positive, frequent, timely manner.

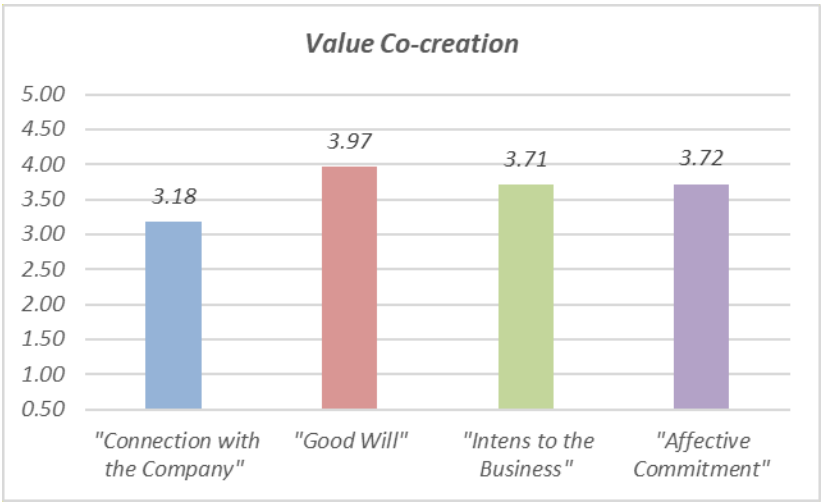

Figure 3: Descriptive statistics of Variable Value Co-Creation

We tested the validity and reliability of the data as well as the construct validity using item-total statistics. If the corrected item-total correlation has a positive value of more than 0.3 for each factor, this can indicate that the instrument has strong construct validity (Sugiyono, 2019). The results of testing the validity of these three variables indicate that all questions are valid. The test results show that the value of Cronbach's alpha of the three variables is greater than 0.6, thus all three variables are reliable.

Before testing the hypothesis using regression analysis, we also tested the classical assumptions, namely the data normality test, multicollinearity test, and heteroscedasticity test. In the normality test using One-Sample Kolmogorov Smirnov, we concluded that the data were normally distributed. In multicollinearity using the tolerance value and Variance Inflation Factor (VIF) we concluded that there was no multicollinearity, and the heteroscedasticity test by looking at the standardized predicted values (ZPRED) and standardized residual (ZRESID) plots revealed no heteroscedasticity. (Due to space limitations, we have not included in detail all of the tables on the validity, reliability, and classical assumption tests that have been done).

4.2 Hypothesis testing

The first test was a regression analysis to test the simultaneous effect of two independent variables (i.e., the online community experience and online community engagement variables) on the dependent variable (value co-creation). The influence of both is simultaneously significant (significant $F < 0.05$). The adjusted R2 of 0.685 indicates the percentage of the variance in the value co-creation that the independent variables (online community experience and online community engagement) explain collectively.

Table 3.a: The Anova Test

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5353.873	2	2676.937	109.758	.000[b]
Residual	2390.166	98	24.389		
Total	7744.040	100			

Note: Dependent Variable - Value Co-creation
Predictors - (Constant), Online Community Experience, Online Community Engagement

Table 3.b: The Model Summary

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.831[a]	.691	.685	4.939

Note: Predictors - Constant, Y, X

Table 3.c: The Coefficient and its Significance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	12.459	2.132		5.843	.000
	Online Community Experience	.840	.144	.616	5.855	.000
	Online Community Engagement	.351	.152	.243	2.312	.023

Note: Dependent Variable - Z (Value Co-creation)

The equation resulting from the regression is;

$$\mathbf{Y2 = 12.459 + 0.840(X) + 0.351\ (Y1) + e}$$

The coefficient value is 0.840, and it has a significant value, indicating that there is a significant influence of the online community experience on value co-creation. The online community experience, which is the overall experience of each member, has a considerable influence on the formation of value co-creation. With the considerable influence exerted, it shows that it is important to develop and give more attention to members to obtain a high level of co-creation, and various efforts can be expended to stimulate customers through a valuable, unique, exciting, and useful experience.

These results are in line with previous studies that concluded that the formation of value co-creation in online communities is indicated by the formation of experiences

gained, especially regarding hedonic experiences (Kristiadi, Hartoyo, Yusuf, & Sukandar, 2014). In this study, pragmatic and hedonic dimensions contribute a greater influence on the formation of value co-creation. Maintaining and strengthening the pragmatic dimension, specifically by providing more value that can be obtained from members by joining the community, can form a high co-creation value attitude to increase the level of co-creation. For example, if you join a community and are active in it, you can gain knowledge not only about Jenius products but also about various other subjects beyond the financial sector.

Online community engagement variables have a positive and significant influence on value co-creation. This indicates that the high involvement of members in a community will affect the formation of the resulting value co-creation. In this study, the coefficient value of 0.351 creates the understanding that, with an increase in online community engagement of 1%, BTPN's Jenius co-creation value will increase by 0.351. The considerable amount of influence given shows that it is important to develop more customer experiences that increase high engagement. A high level of customer engagement creates opportunities for co-creation within a company (Kristiadi, Hartoyo, Yusuf, & Sukandar, 2014). The second hypothesis test uses path analysis, which is an extension of multiple linear regression analysis. Path analysis includes direct effects, indirect effects, and total effects.

The first step is to find a direct relationship or direct influence of Variable X (online community experience) on Variable Y2 (value co-creation); see Table 2.c. The direct influence between Variable X (online community experience) on Variable Y1 (online community engagement) can be seen inTable 3. This shows that the online community experience has a direct effect on online community engagement with a regression coefficient of 0.846.

Table 4: The Coefficient and its Significance

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig**
	B	**Std Error**	**Beta**		
Constant	2.403	1.391	.846	1.727	.087
Online Community Experience	800	.051		15.768	.00

Note: Dependent Variable - Online Community Engagement

To find the indirect effect of the research framework, it is necessary to do a t-analysis test with the aim of finding the value of the partial coefficient. The following figure provides a better understanding of the results and a clear picture of the path analysis:

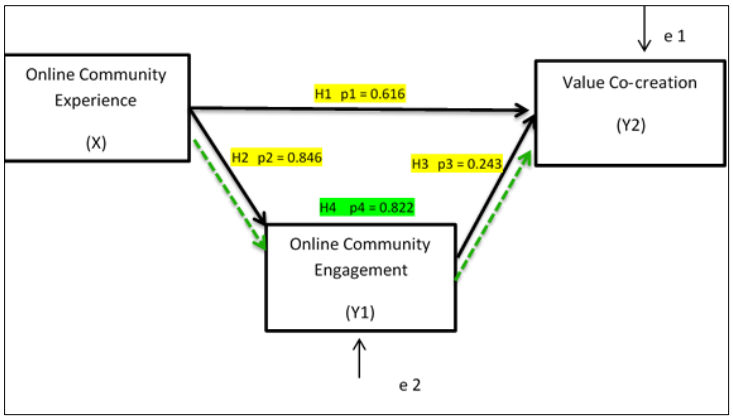

Figure 4: The results of hypothesis testing

H1 = p1, where p1 (X → Y2) = 0,616 (*Standardized coefficients beta* table 2.c.)

H2 = p2, where p2 (X → Y1) = 0,846 (*Standardized coefficients beta* table 3.)

H3 = p3, where p3 (Y1 → Y2) = 0,243 (*Standardized coefficients beta* table 2.c.)

H4 = p4, where p4 (X → Y1 → Y2) = 0,822

Formula to find the indirect effect (X → Y1 → Y2)

$$\mathbf{X \rightarrow Y1 \rightarrow Y2 = (X \rightarrow Y2) + ((X \rightarrow Y1) * (Y1 \rightarrow Y2))}$$
$$\mathbf{= (0.616) + (0.846 * 0.243)}$$
$$\mathbf{= 0{,}822}$$

The value of the direct influence (X→ Y2) of 0.616 is smaller than the indirect effect (X→Y1 →Y2), which is 0.822. This proves that the online community experience has an indirect effect on value co-creation through online community engagement as an intervening variable. Online community engagement can be considered an intervening variable. The direct influence of the online community experience on value co-creation is smaller than the indirect effect of online community engagement on value co-creation. The involvement that is formed from the results of the consumer experience can increase the value of co-creation.

Online community engagement can be measured through the values of enthusiasm, social interaction, and conscious participation. However, the results of this research show that, at Jenius BTPN, the online community engagement variable on the dimensions of social interaction and conscious participation is very low, so Jenius BTPN should consider new strategies to increase social interaction and conscious participation.

A strongly formed online community experience will directly increase value co-creation in a community, so companies must determine the specific goals of each member by joining the community (pragmatism value) as well as creating the latest

fun value (hedonic value), providing convenience in the use of computer and telephone media to join in exploring the community (usability value). As well as forming sociability in the community will form a strong online community experience so that the co-creation value in the community is also strong.

5. CONCLUSION, SUGGESTIONS AND LIMITATIONS

Co-creation is like a ladder on a ladder; the higher the co-creation level, the more valuable the co-creation result is. The first form of participation in this co-creation is participation in assessing, commenting on, and discussing the company's products, and the next higher level of value co-creation is the creation of ideas, brand advertisements, and products. Among the four levels, product creation is the highest level of co-creation (Smith & Zook, 2011). So based on the understanding and results of this research, it can be concluded that Jenius's co-creation is still in the stage of idea creation. Some important findings of this study are as follows:

5.1 The online community experience has a significant and positive effect on value co-creation. The magnitude of the influence given shows that it is important to develop and give more attention to members to increase co-creation. Several actions must be completed to stimulate customers, such as creating a valuable, unique, fun, and useful experience that will increase interest in participating in other events. The pragmatic dimension and the hedonic dimension play an important role (the highest average value compared to the average value of other dimensions), meaning that the values that Jenius co-creation members are interested in are related to the usability and benefits received. Such an action also includes looking for things that are pleasureable so that members are interested in participating in other activities.

5.2 The online community experience has a significant and positive influence on online community engagement. This indicates that, if the company can create a meaningful experience for the community, it can shape customer attitudes to be more engaged and contribute to the company. The value of engagement that is formed in the Jenius community lies in the enthusiasm generated, but the dimensions of social interaction and conscious participation are still low. This indicates that the genius community has not yet achieved a high level of active social interaction and conscious participation.

5.3 Online community engagement has a positive and significant influence on value co-creation. This indicates that, if the involvement of members in a community is high, it will affect the formation of value co-creation. The value that is formed to create shared value in Jenius is based on the value of goodwill. The customer or community member forms goodwill by being willing to always support Jenius to improve its features, even if there is an increase in admin fees, and this supports the co-creation process. The value of the intent to engage in the business dimension and affective commitment generates a sufficient average score. This means that the Jenius community has formed a consumer attitude to build business with the company or maintain an existing business relationship with the company.

5.4 The online community experience has a significant influence on value co-creation through variable online community engagement. With the direct and indirect influence of the online community experience on value co-creation, the Jenius community needs to improve the online community experience and online community engagement, because both will strengthen the formation of value co-creation while also strengthening the parts that are still weak in these two variables.

Based on the results of descriptive statistics, it was found that the value of sociability, social interaction, conscious participation, and connection with the company formed in the online community is still very low. Because the value of consumer contributions lies in increasing opportunities to create shared value, efforts should be made to continue to stimulate member participation, such as by providing giveaways for actively participating members or by holding more events and gatherings directly, in collaboration with influencers, and quality resource persons, as well as providing vouchers for members.

For further research, we suggest adding or using other independent variables such as customers' attitudes toward a brand, customers' attitudes toward a firm, or communication influences on value co-creation. It would also be interesting to examine the influence of customers' purpose, information-searching effectiveness, and communication on the online community experience. The object of research only focuses on the Jenius Online Community (cocreate.id). For future research related to value co-creation, it is recommended that researchers examine the Jenius social media Instagram page @jeniusconnect.

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Department of Banking & Finance
Wayamba University of Sri Lanka

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MODERATING EFFECT OF BOARD INDEPENDENCE ON THE DETERMINANTS OF FINANCIAL PERFORMANCE IN LISTED NON-FINANCIAL COMPANIES OF COLOMBO STOCK EXCHANGE

J S Kumari

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Abstract

The overarching objective of every business organization is to maximize stakeholder wealth, but various financial constraints can hinder this goal. This study mainly focuses on examining the moderating effect of board independence on the determinants of the financial performance of listed non-financial companies in the Colombo Stock Exchange. There is a lack of research on the factors that determine financial performance at both the national and international levels. Further, there is a dearth of studies related to the moderating effect of board independence on the determinants of financial performance. The present study applied the quantitative approach. This study investigates the relationship between the Quick ratio, Total Assets turnover ratio, Leverage, and Growth in sales as independent variables and their impact on Financial Performance as the dependent variable. Additionally, the study incorporates board independence as the moderating variable. Financial performance is measured using Return on Assets (ROA). The study's population comprises listed non-financial companies on the Colombo Stock Exchange and data was collected from the top 100 companies with the highest market capitalization during the latest period spanning 2020 to 2022, descriptive statistics, correlation analysis, and regression analysis were used to analyze the data. This study has observed that total asset turnover and growth in sales have a positive and significant relationship with ROA. However, leverage has an insignificant relationship with ROA. The relationship between quick ratio and ROA is moderated by board independence. Further, the relationship between growth in sales and ROA is moderated by board independence On the other hand, the relationship between total asset turnover, leverage, and ROA is not moderated by board independence. The insights gained from this research will contribute to a better understanding of the determinants of financial performance in the context of listed companies on the Colombo Stock Exchange.

Keywords: Board Independence, Determinants of Financial Performance, Growth in Sales, Leverage, Total Assets Turnover, Quick Assets Ratio

J S Kumari
(Corresponding Author)
Department of Accountancy & Finance, Faculty of Management Studies, Rajarata University of Sri Lanka

Email: skjayasena@mgt.rjt.ac.lk
Tel: +94 71 4058 660
https://orcid.org/0000-0002-9863-3804

1. INTRODUCTION

The primary objective of profit-oriented organizations is to maximize the wealth of their stakeholders. Financial performance plays a crucial role in achieving this objective, as it directly impacts the interests of stakeholders, management, and the board of directors (Signori et al., 2021). Consequently, organizations must prioritize and closely monitor their financial performance. Financial performance, often measured by profitability, holds significant importance for stakeholders as it reflects the organization's ability to generate profits. The profitability of an organization not only determines its future growth and development but also contributes to the overall economic progress of the country. For managers, maximizing profit is a fundamental goal as it ensures the financial stability and sustainability of the organization.

By understanding the factors that drive financial performance, organizations can optimize their operations, make informed decisions, and enhance their competitive advantage. This analysis aids in identifying key performance indicators, improving resource allocation, and aligning strategies to maximize profitability (Kaplan & Norton, 1996).

Existing literature emphasizes the importance of implementing effective corporate governance practices to enhance and sustain organizational growth and performance. Studies indicate that firms in various sectors, particularly real estate, are prone to agency problems and require robust corporate governance mechanisms to mitigate such issues and enhance firm performance (Oak & Iyengar, 2009). The nature of real estate ownership and management often gives rise to conflicts of interest, necessitating the implementation of corporate governance practices to address these challenges. Additionally, the real estate industry's characteristics, such as high capital investment and low operating inventory management, are associated with liquidity constraints and financial inflexibility, highlighting the importance of effective corporate governance in navigating these challenges (Toms & Filatotchev, 2006).

This study focuses on identifying key factors that influence the financial performance of non-financial companies listed on the Colombo Stock Exchange. Additionally, the study examines the moderating effect of board independence on the relationship between these determinants and financial performance. The quick ratio assesses a company's liquidity position, while total assets turnover evaluates its asset utilization for generating sales. Leverage reflects the level of debt and its impact on the company's capital structure, attracting interest from various stakeholders. Furthermore, growth in sales is considered a predictive tool for evaluating a company's prospects (Thi et al., 2021).

In the Sri Lankan context, the specific research gap regarding the moderating effect of board independence on the determinants of financial performance and its relationship has limited recent articles available. However, there is ample evidence from various studies that highlight the importance of board independence and its impact on financial performance in other countries and industries.

Therefore, given the lack of recent articles focusing on the moderation effect of board independence in Sri Lanka, a contemporary issue in Sri Lanka, this study aims to fill the research gap and shed light on the determinants that affect financial performance and the potential effect of board independence in the local context.

2. LITERATURE REVIEW

The study focuses on investigating the moderating effect of board independence on the determinants of financial performance in listed non-financial companies. Board independence refers to the presence of independent directors on a company's board who are not associated with management or major shareholders. Financial performance is a key measure of a company's success and is influenced by various factors.

2.1 Empirical Evidence

2.1.1. Relationship of Quick Ratio to Financial Performance

Numerous studies have examined the relationship between the quick ratio and financial performance, both internationally and within the Sri Lankan context. In a study by Durrah et al. (2016) on listed food industrial firms in the Amman Bursa, a positive relationship was found between the quick ratio and return on assets (ROA). Similarly, Borhan et al. (2014) and Yameen et al. (2019) discovered a positive connection between the quick ratio and financial performance in their studies on different industries. Contrasting findings were reported by Rehman et al. (2015) in their research on the Saudi Stock Exchange, where they identified a negative relationship between the quick ratio and ROA. Akter and Mahmud (2014) also concluded that there is no significant relationship between the quick ratio and return on assets. In another study by Siregar and Mardiana (2022) on food and beverage firms listed on the Indonesia Stock Exchange, the quick ratio was found to partially and significantly influence ROA. In the Sri Lankan context, several researchers have investigated the direct relationship between the quick ratio and firm performance. Madushanka and Jathurika (2018) found a positive relationship between the quick ratio and ROA based on a sample of 15 manufacturing companies listed on the Colombo Stock Exchange. Similarly, Priya and Nimalathasan (2013) analyzed listed manufacturing companies in Sri Lanka and observed a significant positive relationship between the quick ratio and ROA. However, Nishanthini and Meerajancy (2015) found an insignificant correlation between the Quick Ratio and ROA in their study on licensed commercial banks in Sri Lanka. These studies provide evidence for the varying relationships between the quick ratio and financial performance in different industries and geographical contexts, including Sri Lanka. The findings contribute to the understanding of how the quick ratio can impact a company's financial performance and can inform decision-making for businesses and investors.

According to theoretical and empirical evidence, the following hypothesis was developed;

H_1: The relationship between the Quick ratio and ROA is significant.

2.1.2. Relationship between Total assets turnover and financial performance

Numerous academic studies have explored the relationship between total asset turnover and financial performance, both internationally and within the Sri Lankan context. Utami and Manda (2021) found a significant and positive relationship between the total asset turnover ratio and return on assets (ROA) in the cigarette sub-sector companies listed on the Indonesia Stock Exchange. Similarly, Ningrum and Nurmasari (2021) observed a significant and positive influence of the total asset turnover ratio on ROA. Ramli and Yusnaini (2022) demonstrated that total asset turnover significantly and positively impacts ROA based on their study of 49 real estate firms listed on the Indonesia Stock Exchange. Munawar (2019) also found a positive and significant relationship between total asset turnover and firm profitability. In the Jordanian industrial sector, Warrad and Al Omari (2015) concluded that total asset turnover has a significant influence on ROA, while Warrad and Rania (2015) noted. Alarussi and Alhaderi (2018) identified a significant and positive connection between total asset turnover and profitability in their study of 120 firms listed on Bursa Malaysia. However, this study suggested a partial impact of total asset turnover on ROA in their study of 71 transportation firms. According to theoretical and empirical evidence, the following hypothesis was developed;

H_2: The relationship between Total asset turnover and ROA is significant.

2.1.3. Relationship between Leverage and Financial Performance

Numerous scholars have researched the relationship between leverage and financial performance, yielding a variety of findings. Thi Kim et al. (2021), Senan et al. (2021), Burca and Batrinca (2014), have all identified leverage as a determinant of financial performance.

Murigu (2014) found that leverage significantly and positively influences profitability based on a study of 23 general insurance companies in Kenya. Similarly, Matar and Eneizan (2018) observed a positive and significant relationship between leverage and return on assets (ROA) in their study of 23 industrial manufacturing firms in Jordan. Obradovich and Gill (2013) demonstrated a positive relationship between leverage and firm profitability. Ali (2014) also concluded that leverage has a positive relationship with financial performance based on chemical companies listed on the Pakistan Stock Exchange.

However, there are also studies indicating a negative relationship between leverage and profitability. Akinlo and Asaolu (2012) observed that leverage negatively influences profitability (ROA) in their study of 66 non-financial firms listed on the Nigerian Stock Exchange. Bintara (2020) found a negative impact of leverage on profitability in their study of 100 listed firms on the Indonesia Stock Exchange. Ahmad et al. (2015) also reported a negative and significant influence of leverage on profitability based on data from 18 cement manufacturing firms in the Pakistan Stock Exchange. Similarly, Enekwe et al. (2014) found a negative effect of leverage on ROA in their study of three Nigerian pharmaceutical companies. Teshome et al. (2018) observed a negative relationship between leverage and firm performance based on private commercial banks in Ethiopia.

In the Sri Lankan context, Perinpanathan (2014) found a negative relationship between financial leverage and financial performance based on data from the period 2006-2012. Kaluarachchi (2021) found that total asset turnover positively and significantly influences ROA in their study of listed real estate firms on the Colombo Stock Exchange.

These studies provide a diverse perspective on the relationship between leverage and financial performance, highlighting both positive and negative associations. According to theoretical and empirical evidence, the following hypothesis was developed;

H_3: The relationship between Leverage and ROA is significant.

2.1.4. Relationship between Growth in Sales and Financial Performance

Numerous studies have examined the relationship between sales growth and financial performance, resulting in a variety of findings. Thi Kim et al. (2021) found that growth in sales significantly and positively influences financial performance based on listed food processing companies in Vietnam. Pouraghajan et al. (2012) observed a statistically significant positive correlation between growth rate and return on assets (ROA) in their study on the Tehran Stock Exchange.

Papadogonas (2007) indicated that growth in sales significantly impacts firm profitability based on a sample of 3035 firms. Eka (2018) examined the relationship between growth in sales and firm performance and found that growth in sales significantly influences firm performance. Lestari et al. (2022) stated that growth in sales positively impacts firm performance based on their study of real estate sector firms listed on the Indonesia Stock Exchange. House and Benefield (1995) also emphasized the importance of sales growth as a key factor for financial success in the real industry study. Mursalini et al. (2017) identified a significant influence of growth in sales on profitability in the consumer goods industry.

However, some scholars have found no significant relationship between growth in sales and firm performance. Nur and Mahiri (2022) observed no relationship between growth in sales and financial performance in their study of 18 food industry firms listed on the Indonesia Stock Exchange. MengYun et al. (2021) also found that growth in sales does not significantly influence ROA which contrasts with the findings of Mursalini et al. (2017). In the Sri Lankan context, Sanjaya and Jayasiri (2018) identified no significant relationship between sales growth and profitability, measured by ROA, in their study of listed manufacturing firms on the Colombo Stock Exchange.

These studies provide diverse perspectives on the relationship between sales growth and financial performance, indicating both positive and non-significant associations. The findings contribute to the understanding of how sales growth can impact firm performance and can guide decision-making in strategic planning and resource allocation. According to theoretical and empirical evidence, the following hypothesis was developed;

H_4: The relationship between Growth in sales and ROA is significant.

2.1.5. Moderating Effect of Board Independence on the Determinants of Financial Performance

As a result of inconsistent results of the relationship between determinants and firm performance, several studies suggest that board independence should be considered in this regard (Yasser et al., 2020).

Boubaker and Nguyen (2014) investigated the moderating effect of board independence on the relationship between CEO power and leverage decisions. While their study did not directly focus on the determinants mentioned (quick ratio, total assets turnover ratio, leverage, and growth), it provided valuable insights into the broader context of board independence and its impact on financial decisions. The findings indicated that independent commissioners play a crucial role in reducing the influence of CEO age and gender on leverage decisions. This suggests that a more independent board composition can potentially mitigate the impact of CEO power on financial decision-making. Similarly, the study conducted by Yasser et al. (2020) also explored the broader context of board independence and its impact on financial performance. Although not specifically addressing the determinants mentioned, their study provided insights into the potential influence of board independence on firm performance. By examining the moderating effect of board independence on the relationship between capital structure and firm performance, their findings shed light on the role of independent boards in shaping financial outcomes.

Additionally, Cheng and Indjejikian (2011) examined the impact of board composition, including board independence, on firm performance. While their study did not directly focus on the mentioned determinants, it provided insights into the broader relationship between board composition and financial performance. By investigating the potential substitution or complementarity effects of board independence, their findings highlighted the importance of board composition in influencing firm performance.

These studies collectively contribute to our understanding of the broader impact of board independence on financial decisions and performance. While they may not specifically address the relationships between the determinants (quick ratio, total assets turnover ratio, leverage, growth) and financial performance, they underscore the significance of board independence as a key factor in shaping financial outcomes in organizations. According to theoretical and empirical evidence, the following hypotheses were developed;

H_5: The relationship between Quick ratio and ROA is moderated by Board Independence

H_6: The relationship between Total asset turnover and ROA is moderated by Board Independence

H_7: The relationship between Leverage and ROA is moderated by Board Independence

H_8: The relationship between Growth in sales and ROA is moderated by Board Independence

2.2 Research Gap

The research gap in the literature can be identified based on the mixed and contrasting findings in the relationships between the quick ratio, total assets turnover, leverage, and growth in sales with financial performance. Additionally, there is a research gap in the specific context of the Sri Lankan market. While some studies have examined these relationships in Sri Lanka, the number of studies is relatively limited, and there is a need for more comprehensive and updated research that specifically focuses on the Sri Lankan non-financial companies listed on the Colombo Stock Exchange. Moreover, the literature review did not mention any studies that specifically investigated the moderating effect of board independence on the relationships between these determinants and financial performance in the Sri Lankan context. This presents a research gap and highlights the importance of exploring the role of board independence as a moderator in shaping the relationships between these determinants and financial performance.

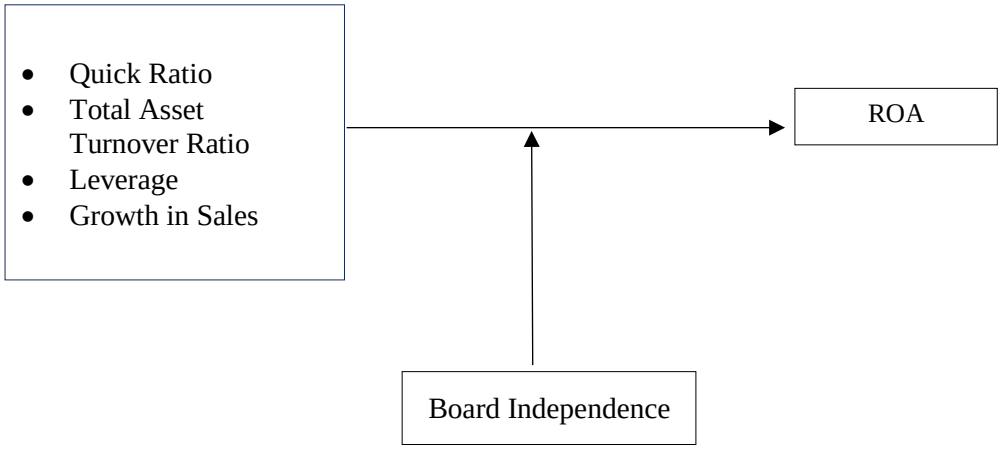
To address these research gaps, future studies can conduct empirical research using larger and more diverse samples of Sri Lankan non-financial companies to gain a better understanding of the relationships between these determinants and financial performance. Furthermore, investigations into the moderating effect of board independence can provide valuable insights into the dynamics of corporate governance and its influence on financial performance outcomes.

3. METHODOLOGY

Present study to examine the Moderating effect of board independence for the determinants of Financial Performance. Therefore, performing this allows identifying what kind of relationship among these variables through the quantitative approach and deductive approach has been used. The population is 294 companies in the Colombo Stock Exchange, for this study, 100 non-financial companies from Colombo Stock Exchange have been selected and data from 2020-2022 have been collected. The independent variables of this study are the quick ratio, total asset turnover ratio, leverage, and growth in sales. Return on Asset (ROA) has been used as a measurement of the profitability of a firm because the ROA is considered as the most popular and most useful financial ratio among other profitability ratios (Jewell & Mankin, 2011). The moderating variable of this study is board independence. Board independence is considered one of the main variables in corporate governance practices.

3.1 Conceptual Framework

Figure 1 shows the conceptual framework of this study.



Source: Constructed by author

Figure 1: Conceptual Framework

3.2 Operationalization of the variables

Table 1 shows the operationalization of the variables.

Table 1: Operationalization of the variables

Variable	Measurement	Past studies
Quick Ratio (QR)	Current assets- Inventory / Current liabilities	Siregar and Mardiana (2022); Madushanka and Jathurika (2018)
Total Assets Turnover (TAT)	Percentage of net sales to Average total assets	Ramli and Yusnaini (2022); Kaluarachchi (2021)
Leverage (LEV)	Earnings before interest and taxes (EBIT), then divided by the interest expense of long-term debts	Senan et al. (2021); Teshome et al. (2018)
Growth in sales (GIS)	Percentage change in sales compared to the last year	Lestari et al. (2022); MengYun et al. (2021)
ROA	Return on Assets (% of net income to the total assets)	Lestari et al. (2022); MengYun et al. (2021)
Board Independence (BI)	The number of Independent non-executive directors on the board. *100 / Total number of board members	Rosenstein and Wyatt, (1990)

Source: Constructed by author

The analysis involved descriptive analysis, where a given data set was summarized to represent samples and data measures. This descriptive analysis table contained information on minimum and maximum values, as well as mean and standard deviation values, for both individual companies and average values within the industry. This allowed for understanding the distribution of data among non-financial companies listed in the Colombo Stock Exchange (CSE). Moving on to the second step, correlation analysis was conducted to examine the statistical relationships between independent, dependent, and moderate variables. Finally, the third step utilized regression analysis, a statistical process aimed at estimating the relationships between variables. The primary objective of regression analysis was to determine the strength of the relationship between the dependent and independent variables during the observation period.

4. FINDINGS AND DISCUSSION

Before conducting the analysis, four diagnostic tests were performed to consider winsorizing the data set. To assess the stationarity of the variables, the Unit Root Test was conducted. In all independent and dependent variables, the null hypothesis, the data series is not stationary is rejected. Hence, all data series in independent and dependent variables are assumed to be stationary. The Variance Inflation Factor (VIF) was used to assess multicollinearity across all explanatory factors. All explanatory variables are not severely affected by multicollinearity because all VIF factors are less than 5, it can be said.

4.1 Correlation Analysis

Based on the correlation analysis (Table 2), the relationship between TAT (Total Asset Turnover) and ROA (Return on Assets) is weak and positively significant. The correlation value between TAT and ROA is 0.281. Similarly, the correlation between GIS (Global Industry Sales) and ROA is positive, but the relationship is very weak. The correlation value between GIS and ROA is 0.134, and it is statistically significant at the 0.05 level. Conversely, there is no significant relationship between ROA and QR (Quick Ratio).

Table 2: Correlation Analysis

	ROA	**TAT**	**QR**	**LEV**	**GIS**	**BI**
ROA	1					
TAT	0.281**	1				
QR	-0.018	-0.155**	1			
LEV	-0.118	-0.021	0.340**	1		
GIS	0.134*	-0.064	0.063	-0.068	1	
BI	-0.067	-0.125	-0.122	-0.042	0.044	1

**. Correlation is significant at the 0.01 level, *. Correlation is significant at the 0.05 level

The correlation value between these two variables is not statistically significant, indicating that the relationship is not strong enough to be considered meaningful. Moreover, the correlation between ROA and LEV (Leverage) is also not significant. The correlation value between ROA and BI does not meet the significance threshold, as the P value is not less than 0.05. Therefore, the evidence suggests that there is no significant relationship between ROA and BI.

4.2 Panel Regression Analysis

According to this Hausman test, the p-value is 0.0698 which is not significant at a 5% significance level (0.0698 >0.05). Therefore, the null hypothesis can be accepted and the alternative hypothesis should be rejected. Hence, the random effects model can be utilized for this regression model.

4.2.1. Panel regression (ROA) without moderation effect

Table 3: Panel Regression (ROA) without Moderation Effect

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.02272	0.01186	1.91517	0.05680
TAT	0.05616	0.01216	4.61936	0.00000
QR	0.00157	0.00177	0.88423	0.37750
LEV	-0.01693	0.00937	-1.80806	0.07200
GIS	0.02422	0.01093	2.21547	0.02780
R-squared	0.11589			
F-statistic	7.20948			
Prob(F-statistic)	0.00002			

Source: Constructed by author

Based on the above analysis, there is a positive relationship between TAT and ROA, as indicated by the positive coefficient of TAT. This relationship is statistically significant at the 5% level of significance. Conversely, the relationship between QR and ROA is not statistically significant since the p-value exceeds 5%. Furthermore, the analysis reveals a positive and significant relationship between GIS and ROA at the 10% level of significance. On the other hand, the pooled regression model shows that the relationship between LEV and ROA is not significant at the 5% level of significance.

The combined influence of TAT, QR, LEV, and GIS on ROA explains 11.5890% of the variation in ROA. The regression model's p-value is 0.00002, which is less than 5%, indicating that the model is statistically significant. Thus, it can be concluded that both TAT and GIS jointly influence ROA.

4.2.2. Regression model (ROA) considering the moderation effect

Based on the results (Table 4), the constant value (C) is 0.098542, indicating that when considering the independent variables TAT, QR, LEV, GIS, and the moderating variable BI, along with their respective interactions (TATBI, QRBI, LEVBI, and GISBI) as constant, the predicted value for ROA is 0.098.

Table 4: Regression model (ROA) considering moderation effect

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.098542	0.149681	0.658347	0.5114
TAT	0.193637	0.151700	1.276442	0.2039
QR	-0.155198	0.028810	-5.386931	0.0000
LEV	-0.057575	0.119331	-0.482477	0.6302
GIS	0.007748	0.038258	0.202522	0.8398
BI	-0.258699	0.382216	-0.676841	0.4996
TAT*BI	-0.460697	0.385333	-1.195580	0.2339
QR*BI	0.483575	0.085033	5.686918	0.0000
LEV*BI	0.123384	0.352828	0.349701	0.7271
GIS*BI	0.056938	0.088827	0.641001	0.0026
R-squared	0.677494			
F-statistic	3.568690			
Prob(F-statistic)	0.000000			

Source: Constructed by author

Analysing the individual coefficients, it appears that TAT has no significant influence on ROA since its coefficient is not statistically significant. On the other hand, QR has a negative and significant effect on ROA, with a coefficient of -0.155 and a p-value less than 5%. However, LEV's coefficient indicates that it does not have a significant effect on ROA. Additionally, the relationship between GIS and ROA is found to be insignificant. Considering the moderating effect of BI on the relationships between the independent variables and ROA, the interaction of TAT and BI is not significant. Therefore, H6, which suggests that the relationship between Total Asset Turnover and ROA is moderated by board independence, cannot be supported. When considering the moderating effect of BI on the relationship between LEV and ROA, the interaction of LEV and BI is not significant leading to the not support of H7, which claims that the relationship between Leverage and ROA is not moderated by board independence. However, the interaction of GIS and BI is significant, resulting in the support of H8, which suggests that the relationship between Growth in Sales and ROA is moderated by board independence.

The R-squared of this model is 0.677494 and it indicates that a 67.74% variation of ROA is explained by independent variables QR, GIS, and the moderating variable BI. It indicates a relatively strong fit for the model with the moderating effect of board

independence, suggesting that this model is effective in explaining a substantial portion of the variability in the dependent variable within the context of the study. According to the results of this regression model, the quick ratio and ROA have a significant relationship. The relationship between total asset turnover, leverage, growth in sales, and ROA have insignificant.

5. DISCUSSION

5.1 Relationship between Quick Ratio and ROA

Durrah et al. (2016) found a positive relationship between the quick ratio and ROA in the food industrial firms listed on the Amman Bursa. Similarly, Yameen et al. (2019) observed a positive connection between the quick ratio and ROA in 82 pharmaceutical companies listed on the Bombay Stock Exchange. On the contrary, Rehman et al. (2015) reported a negative relationship between the quick ratio and ROA based on 99 listed firms on the Saudi Stock Exchange. However, Akter & Mahmud (2014) concluded that there was no significant relationship between the quick ratio and ROE in their study. In the context of Sri Lanka, Madushanka and Jathurika (2018) found a positive relationship between the quick ratio and ROA in 15 manufacturing companies listed on the Colombo Stock Exchange. Similarly, Priya and Nimalathasan (2013) observed a significant positive relationship between the quick ratio and ROA in their study. The results of the current study also show a positive relationship between QR and ROA, which aligns with the findings of Durrah et al. (2016), Yameen et al. (2019), Madushanka and Jathurika (2018), and Priya and Nimalathasan (2013). However, the relationship varied when considering the moderating effect of board size. Unlike the previously mentioned studies, this study accounted for the moderating effect of board size, which influenced the relationship between QR and ROA.

5.2 Relationship between the Total Asset Turnover Ratio and ROA

Utami & Manda (2021) found a significant and positive relationship between the total asset turnover ratio (TAT) and ROA in cigarette sub-sector companies listed on the Indonesia Stock Exchange. Similarly, Ningrum and Nurmasari (2021) illustrated that TAT significantly and positively influences ROA in their study. Furthermore, Ramli and Yusnaini (2022) indicated that TAT has a positive and significant influence on ROA based on their research involving 49 real estate firms listed on the Indonesia Stock Exchange. In the context of Jordanian industrial sector firms, Warrad & Al Omari (2015) observed a significant influence of TAT on ROA. Similarly, in the Sri Lankan context, most scholars have observed a positive relationship between total asset turnover and ROA, as noted by Kaluarachchi (2021). In this current study, the researchers also observed a positive and significant relationship between TAT and ROA in an unmoderated model, aligning with the findings of previous studies mentioned, including Utami and Manda (2021); Ningrum and Nurmasari (2021); Ramli and Yusnaini (2022); Warrad and Al Omari (2015), and Kaluarachchi (2021). In summary, the findings of this study are consistent with previous research conducted by Utami and Manda (2021); Ningrum and Nurmasari (2021); Ramli and

Yusnaini (2022); Warrad and Al Omari (2015), and Kaluarachchi (2021), all of which support a significant and positive relationship between total asset turnover and ROA.

5.3 Relationship between Leverage and ROA

Thi Kim et al. (2021); Burca and Batrinca, (2014); Senan et al. (2021); Murigu, (2014); Enekwe et al. (2014); Teshome et al. (2018), and Matar and Eneizan, (2018) indicates that leverage influences profitability significantly and positively based on 23 general insurance companies in Kenya. In addition to that, Matar and Eneizan, 2018 also state that the connection between leverage and ROA is positive and significant concerning 23 industrial manufacturing firms in Jordan. Furthermore, Obradovich and Gill, (2013) illustrate a positive relationship exists between leverage and the profitability of a firm based on a sample of 333 firms listed on the New York Stock Exchange. However, Akinlo and Asaolu (2012) have observed that leverage influences profitability (ROA) negatively. Furthermore, Bintara (2020) expresses that profitability is negatively affected by the leverage of employing 100 listed firms in the Indonesia Stock Exchange. As well as, Enekwe et al. (2014) perceived that the ROA is negatively affected by the leverage. These findings were observed by employing 3 Nigerien pharmaceutical companies. In the Sri Lankan context, Perinpanathan (2014) perceived that a negative relationship exists between financial leverage and financial performance by utilizing data from the 2006-2012 period of John Keells Holdings plc in Sri Lanka. This study identified that no relationship exists between leverage and ROA. Economic conditions can influence companies' borrowing decisions and may be the practical reason why no significant relationship exists between leverage. During periods of economic downturns or instability, companies may reduce their debt levels to mitigate financial risks, leading to a weaker relationship between leverage and ROA.

5.4 Relationship between sales growth and ROA

Numerous studies have explored the link between sales growth and financial performance. Thi Kim et al. (2021) found that growth in sales has a positive and significant impact on financial performance, based on listed food processing companies in Vietnam. Similarly, Pouraghajan et al. (2012) reported a statistically and positively correlated relationship between growth rate and ROA. In the real estate sector, Lestari et al. (2022) demonstrated that growth in sales positively influences firm performance for companies listed on the Indonesia Stock Exchange. Mursalini et al. (2017) also identified a significant influence of growth in sales on profitability in the consumer goods industry. On the other hand, Nur & Mahiri (2022); MengYun et al. (2021), and Sanjaya and Jayasiri (2018) observed a negative effect of sales growth on ROA in their respective studies. However, the results of this current study indicate a positive and significant relationship between growth in sales and ROA. Therefore, the findings of this study align with the conclusions of Le Thi Kim et al. (2021); Pouraghajan et al. (2012); Lestari et al. (2022), and Mursalini et al. (2017). In summary, various research studies have examined the connection between sales growth and financial performance, with differing results. Nevertheless, the findings of this particular study suggest a positive and significant relationship, consistent with the conclusions of selected previous studies mentioned.

5.5 Moderating Effect of Board Independence for the Determinants of Financial Performance

Findings of the study state that the relationship between the Quick Ratio and ROA is moderated by board independence, and should be accepted. Further, the relationship between the GIS and ROA is moderated by Yasser, Kalli, and Syed (2020) also explored the broader context of board independence and its impact on financial performance. When considering the moderating effect of BI on the relationship between LEV and ROA, the interaction of LEV and BI is not significant, which claims that the relationship between Leverage and ROA is not moderated by board independence. Similarly, the interaction of TAT and BI is not significant.

The substantial increase in R-squared from 0.11589 to 0.677494 when board independence (BI) is included suggests that board independence plays a significant role in enhancing the model's explanatory power. The moderating effect of board independence seems to contribute substantially to the model's ability to account for the observed variations in the dependent variable, emphasizing the importance of this moderating factor in influencing the relationship between the independent and dependent variables.

6. CONCLUSION AND IMPLICATIONS OF THE STUDY

The objective of this study is to examine the relationship between quick ratio, total asset turnover, leverage, growth in sales, and financial performance. In addition to that, examining the moderating effect of board independence on the relationship between quick ratio, total asset turnover, leverage, growth in sales, and financial performance is also an objective of this study. This study used 100 non-financial companies listed in the Colombo Stock Exchange as the sample size from 2020 to 2022. The total number of observations is 300. In the regression model without considering moderation, the study examined the relationship between the dependent variable, Return on Assets (ROA), and four independent variables: the quick ratio, total asset turnover ratio, leverage, and growth in sales.

The results of the regression model without considering moderation indicate that the quick ratio and ROA do not have a statistically significant relationship, implying that changes in the quick ratio do not have a substantial impact on the variation in ROA. On the other hand, the total asset turnover ratio exhibited a positive and significant relationship with ROA. This indicates that an increase in total asset turnover is associated with higher ROA, suggesting that companies with efficient asset utilization tend to have better financial performance. Similarly, the study found a positive and significant relationship between the growth in sales and ROA. This suggests that higher sales growth is linked to higher ROA, indicating that firms experiencing rapid sales growth may be more profitable. However, the analysis did not find a significant relationship between leverage and ROA, implying that changes in leverage levels do not have a substantial effect on ROA.

Regarding the moderating effect of Board Independence (BI), the study reveals that it is significant for the relationship between Quick Ratio (QR) and ROA. This means that the presence of independent board members has a moderating influence on the

relationship between QR and ROA. However, for the relationships involving Total Asset Turnover (TAT), Leverage (LEV), and Growth in Sales (GIS) with ROA, the moderating effect of BI is not significant.

7. IMPLICATIONS

In the past, numerous scholars have conducted studies focusing on the direct relationships between the quick ratio, total asset turnover, leverage, growth in sales, and ROA. However, this current study takes a unique approach by examining the moderating effect of board independence on these financial determinants and financial performance indicators. In the specific context of Sri Lanka, the researcher was unable to find the study of investigation the moderating effect of board independence on the quick ratio, total asset turnover, leverage, growth in sales, and ROA. As a result, this study has successfully addressed this empirical gap by delving into the interplay between corporate governance factors, financial determinants, and financial performance measures in the Sri Lankan setting. By examining this unexplored dimension, this study contributes valuable insights to the existing body of knowledge in corporate finance and governance, providing a deeper understanding of how board independence can influence the relationships between financial ratios and financial performance indicators. It paves the way for future research in the field and offers a more comprehensive understanding of the factors that shape organizational performance in Sri Lanka's business landscape.

Managers and executives can use the insights from the study to make informed decisions about the importance of sales growth and its impact on financial performance. They can focus on strategies to enhance sales growth and capitalize on its positive effects on profitability. Companies can reconsider their financial strategy, considering that leverage (debt) does not appear to have a significant impact on ROA. Instead of heavily relying on debt financing, companies may explore other avenues for raising capital. In conclusion, this study provides valuable insights into the relationship between financial variables and financial performance. The findings can guide companies in making informed decisions and improving their financial strategies. However, as with any research, it is essential to consider the limitations and external factors that may influence the results.

7.1 Limitations and future research directions

The study's main focus is to investigate the moderating effect of board independence on financial performance determinants, such as the quick ratio, total asset turnover, leverage, and growth in sales. It should be noted that this research does not specifically target firms in the financial sector of Sri Lanka. The study presents ample opportunities for future research. One potential avenue is conducting a sector-specific study on financial firms in Sri Lanka to analyze how board independence influences financial performance within this industry, providing valuable insights into the unique challenges faced by financial institutions.

Furthermore, exploring the impact of board independence on financial performance for non-listed firms in Sri Lanka can offer a comprehensive understanding of corporate governance practices in both listed and non-listed companies. Researchers

could also broaden their scope by studying listed firms in developed countries and investigating how board independence interacts with financial determinants to impact performance. Comparing findings across different economies can provide insights into the universality or context-specific nature of corporate governance practices in influencing financial outcomes.

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Department of Banking & Finance
Wayamba University of Sri Lanka

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IMPACT OF BANK-SPECIFIC AND MACROECONOMIC FACTORS ON THE PROFITABILITY OF COMMERCIAL BANKS IN SRI LANKA

D M Jayasena
T Karunarathne

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Abstract

The objective of this research study is to investigate the impact of Bank specific and Macroeconomic indicators/forces on the Profitability of the Listed Commercial banks in Sri Lanka. Balance panel data regression analysis mode was used to analyze the data. Data for each macroeconomic and bank-related variables were collected with the assistance of secondary resources and it covers a period of 13 years commencing from the year 2006 up to 2018. The study sample contained nine licensed commercial banks that cover both the private and government sector. The study employed ROA and ROE as dependent variables while using exchange rate, GDP growth, inflation, lending interest rate, unemployment rate, BOP, Central government debts, operating margin, deposits, loan to assets, debt to equity, capital adequacy, loans to deposits and assets size as independent variables. Inflation, Balance of payments, Central government debts, operating margin, loans, equity debt, and capital adequacy variables were positively correlated with both ROA and ROE while the rest of the variables indicated a mixed effect under two regression models. Many existing studies on Banks profitability have focused either on Bank specific or macroeconomic variables but this study focused on both bank specific as well as macroeconomic factors giving equal weight for both factors as well as extending existing literature by including variables such as central government debts and BOP.

Keywords: Bank Specific Determinants, Commercial Banks, Macroeconomic Determinants, Profitability, Regression Model

D M Jayasena
(Corresponding Author)
Department of Industrial Management, Faculty of Applied Sciences, Wayamba University of Sri Lanka
Email: *jayasena@wyb.ac.lk*
Tel: +94 71 7864 305
https://orcid.org/0000-0002-3854-3946

T Karunarathne
Department of Finance, University of Sri Jayewardenepura, Sri Lanka
Email: *tharindu777bandara@gmail.com*

1. INTRODUCTION

The banking industry is often considered the lifeblood of a modern economy, and banks are crucial players in the financial industry, playing a pivotal role in running an economy. Meeting the financial needs of agriculture, trade, and industry sectors with a high level of accuracy and responsibility is crucial for achieving greater economic development in a country. Therefore, the development of a country is closely linked to the development of its banking industry. In a sophisticated economy, banks should be seen as core drivers of economic development, not just as money marketers or intermediaries. They play an essential role in mobilizing deposits and paying off debts across multiple sectors of the economy. The economic health of a territory is reflected in its banking system, and the resilience of an economy is deeply dependent on the strength and efficiency of its financial system. (Kengatharan and Suganya, 2018).

Banks provide vital financial services that stimulate economic growth in any country. In Sri Lanka, the banking industry is dominated by Licensed Commercial Banks (LCBs) and licensed Specialized Banks (LSBs), accounting for the majority of the financial system's assets (Central Bank of Sri Lanka, 2019). In this regard, the performance of the banking sector is important to be analyzed. Banking performance can be measured in many ways. Banking profitability is one measurement of banking Performance. Bank performance is defined as the capacity to generate sustainable profitability (European Central Bank, 2018). Profitability is important for the bank to survive and grow in the industry. Banks profitability is impacted due to both bank specific factors as well as due to macroeconomic forces that are beyond the control of a bank. This research tries to find the impact of bank specific and macroeconomic factors on the profitability by employing balance panel data regression model.

Most of the existing studies focused on bank specific factors when analyzing bank profitability. They have emphasized heavily on those bank internal factors (ratios). But some scholars such as Ariyadasa et al, and Selvanathan (2017) touched on three macroeconomic variables (GDP, inflation and interest rate). Kengatharan and Suganya (2018) focused on internal profitability determinants. Therefore, this research study aims to examine the impact of bank specific and macroeconomic variables on banks profitability by extending the previous findings by giving equal emphasize on both bank specific as well as macroeconomic determinants (seven bank specific and seven macroeconomic variables) by expanding those variables with the support of balance panel data regression analysis. This study will be worthy to different stakeholders as scholars, academic persons, managers, investors, policy makers and regulatory bodies as it recognizes the direction and magnitude of each bank specific and macro level profitability determinants. This study will facilitate government regulators in formulating finance and fiscal policies.

2. LITERATURE REVIEW

Bank profitability is typically measured using a combination of internal and external indicators. Internal determinants are based on the bank's financial statements, such as

its balance sheet and profit and loss accounts, while external determinants come from macroeconomic variables.

Structure conduct performance theory (SCP) and Market power (MP) hypothesis theoretically support the bank profitability determinants. SCP suggests firms' profit depends on the level of industry concentration. Short (1979) found a statistically positive, nonlinear and weak relationship between level of concentration and profitability.MP hypothesis suggests that market power is the key variable that changes profitability of a firm. Salike (2016) recognized market structure as the suitable proxy for the market power. Those are the initial studies that laid the foundation for examining the bank's profitability determinants.

Previous research has often used bank size as a determinant of profitability, typically measured by the natural logarithm of the bank's total assets. However, studies have produced mixed results, with some finding a negative correlation between bank size and profitability (Thevaruban, 2017; Athansoglu, 2005) and others finding a positive correlation (AL-Omar and AL-Mutari, 2008; Goddard et al , 2004; Suffian and Habibullah, 2009; Puah and Ali, 2017; Anbar and Alper, 2011).

Capital adequacy is a critical measure of the financial health and stability of banks. It is defined as the ratio of a bank's capital to its risk-weighted assets, which reflects a bank's capacity to absorb potential losses arising from its lending and investment activities. Several academic works have examined the relationship between capital adequacy and bank profitability. According to the majority of research findings, including Ariyadasa et al, (2017); Anbar and Alper, (2011); Kengatharan and Suganya, 2018, Menicucci and Paolucci (2015), and Goddard et al (2004), capital adequacy has a positive impact on bank profitability. However, a few studies, such as Weerasinghe and Perera (2013); Ashraf and Masood (2012), and Thevaruban (2017), have reported a negative correlation between capital adequacy and bank profitability. This negative relationship could be due to the high costs of maintaining higher capital levels or the negative impact on the bank's lending activities. In conclusion, while capital adequacy is generally viewed as a positive determinant of bank profitability, the relationship may vary based on several factors, including the bank's business model, size, and the regulatory environment.

Ownership status is another commonly used bank-specific profitability determinant identified within the existing literature. This is based on the view that management incentives differ under different forms of bank ownership (Christos. and Geoffrey, 2004). Previous researchers, including Molyneux and Thornton (1992); Trindade and Garcia (2018); Short (1979), and Bourke (1989), have found a positive correlation between ownership status and a bank's profitability, while some researchers, such as Athansoglu (2005), have produced contradictory findings. However, the majority of results support the notion that "ownership status is positively associated with a bank's profitability."

Operating efficiency or operating margin is another important internal profitability determinant that is widely used in existing literature. It is a common benchmark that companies use to determine how efficiently their management keeps operating costs

low while earning revenue or making sales. Weerasingha and Perera (2013); Thevaruban (2017); and Athansoglu (2005) have found that operating efficiency has a negative impact on a bank's profit levels, while other researchers such as Ashraf and Masood (2012) and AL-Mutari and AL-Omar (2008) have found that operating efficiency has a positive impact on a bank's profitability.

Deposits to total assets ratio is another crucial internal profitability determinant of banks which is discussed in much of the existing literature. It is a measure of a bank's liquidity, where a higher ratio indicates a sound liquidity position. Research carried out by Anbar and Alper (2011) has found that loans to assets reflect a negative correlation with a bank's profitability, but another study done by Panditharathne and Kawshala (2017) and Trindade and Garcia (2018) has found contradictory results to the previous findings. Many scholars have also used the loans to assets ratio as an internal profitability determinant factor in their academic works. Suffian and Habibullah (2009); Thevaruban (2017); Ashraf and Masood (2012); Paolucci and Menicucci (2015) have all found that loans to assets positively impact a bank's profitability.

When considering macroeconomic variables, many researchers have not given significant attention to external profitability determinants of banks. GDP growth rate has been a common external profitability determinant used by scholars to measure the impact on a bank's profitability. Perales et al (2014); Garcia and Guerreiro (2016); Weerasingha and Perera (2013), and Ariyadasa et al (2017) found that GDP growth rate positively impacts the bank's profitability. However, other authors such as Anbar and Alper (2011); Ashraf and Masood (2012) and Trindade and Garcia (2018) have reported contradictory outcomes.

The inflation rate is another important external profitability determinant widely used in the existing literature. It measures the general price levels within an economy and has a direct impact on an organization's profitability. Athansoglu (2005); Molyneux and Thornton (1992); Trindade and Garcia (2018); Ariyadasa et al (2017); Anbar and Alper (2011) and Ashraf and Masood (2012) have reported that the inflation rate positively correlates with a bank's profitability. On the other hand, Weerasinghe and Perera (2013) and Garcia and Guerreiro (2016) found that inflation rate has a negative impact on a bank's profitability.

As per the existing literature, such studies are either focus on bank specific profitability determinants or macroeconomic variables. But few studies such as Ariyadasa et al, (2017); Anbar and Alper, (2011) have focused on few macroeconomic factors. Moreover studies such as Tauringana et al et al., 2018) focused only on the macroeconomic factors. Paolucci andMenicucci (2016) has focused only on internal determinants. Therefore this research study addresses this existing knowledge gap by employing both bank specific and macroeconomic variables placing equal weights. Studies such as Suffian and habibillah (2009); Al-Mutairi and Al-Omar (2008) have employed analytic techniques as multivariate regression or seemingly unrelated regression analysis and Ariyadasa et al., (2017) has used ECM and ARDL methods. Therefore, this study employed balanced panel data regression analysis with fixed effects, random effects and OLS according to statistical

thresholds. This study analyses the already employed variables in existing literature as well extend the existing literature by employing novel variables fulfilling all the statistical benchmarks as well.

3. METHODOLOGY

The research population consisted of all listed commercial banks across the country, spanning from 2006 to 2018. According to the Central Bank of Sri Lanka, there were 26 listed commercial banks registered in Sri Lanka in 2018. Due to various constraints explained at the beginning, a sample of only 9 listed commercial banks in Sri Lanka was used in this academic work. The sample included 2 frontline government-run commercial banks and 7 privately run listed commercial banks. The sample was selected using convenient sampling, which exclusively focused on previous data that spanned over a decade, in order to create a profound statistical model.

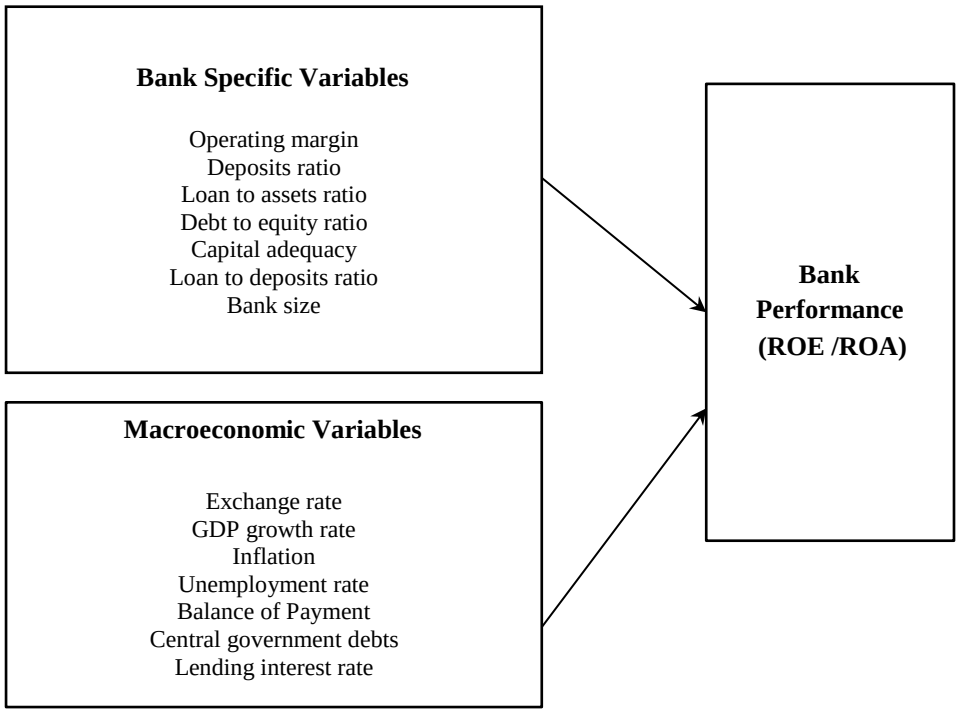
The research extracted external data on the macroeconomic variables that affect a bank's profitability. The study analyzed the Colombo consumer price index (CCPI) to extract the price level rate, gross domestic product, and exchange rate, as well as the weighted average lending rate. The remaining macroeconomic variables were obtained from the central bank's yearly report for the year 2018.

The seven monetary ratios related to the banks were measured using the support of the individual commercial bank's recent 13 years of annual reports. All macroeconomic items/determinants were represented as yearly data, with lending interest rates illustrated monthly and in three-month modes by the CBSL. As a result, the author selected the average measures for the lending interest rates to carry out the analytical process.

3.1 Variables

The study embedded 15 variables unlike any previous studies to test the bank-related and external profitability determinants of listed commercial banks in Sri Lanka. The dual variables were deployed as controllable variables, while the remaining variables were treated as explanatory variables. ROA and ROE were treated as dependent variables, while the Exchange rate, GDP growth rate, Inflation rate, Lending interest rate, Unemployment rate, Balance of payments, and Central government debts were considered macroeconomic explanatory variables. Meanwhile, Operating margin, Deposits ratio, Loans to total asset ratio, Debt to equity ratio, capital adequacy ratio, Loans to deposits ratio, and Bank size were considered as bank-identical explanatory measures.

The academic work utilized the "STATA/IC 14.2" statistical function to analyze the data. The "balanced panel data analysis" was selected to test the statistical outcomes. Both the Fixed Effect and OLS regression techniques were collaboratively used in reaching conclusions and findings, as revealed by the Hausman Test. The conceptual framework of this study is shown in the Figure 1 with some modification of previous studies.



Source: Author development with previous studies

Figure 1: Conceptual Framework

4. RESULTS AND DISCUSSION

Two regression models were developed using balanced panel data analysis, consisting of nine panels and a total of 117 observations. Although the method assumed linearity between the controllable variable and the explanatory variables, the model was tested with the ordinary least squares method assumptions before arriving at the final results.

The panel data is used in analyzing the impact on banks' profitability. In the panel data the used model consists n cross- sectional units, denoted n= 1, . . ., N, observed at each of T time periods, t= 1, . . .,T. In data set, the total observation is n*T. The basic framework for the panel data is defined as per the following regression model (Brooks, 2008):

$$\mathbf{y_{nt} = \alpha + \beta x_{nt} + \mu_{nt}}$$

Where the dependent variable is denoted by (profitability) y_{nt}. Intercept term used and denoted by α, on the explanatory variables, β is a k*1 vector of parameters to be estimated, and vector of observations is x_{nt} which is 1*k, t=1….T: n=1,…, N.

The functional form of above model is as follows:

Profitability = *f* (macroeconomic variables, bank specific variables)

$$ROA = \alpha + \beta 1Ex\ rate + \beta 2GDP\ growth + \beta 3Inflation + \beta 4Lending + \beta 5Unemployment + \beta 6BOP + \beta 7CGD + \beta 8OPI + \beta 9Deposits + \beta 10Loans + \beta 11DE + \beta 12CA + \beta 13LD + \beta 14Log\_A + \mu nt$$

$$ROE = \alpha + \beta 1Ex\ rate + \beta 2GDP\ growth + \beta 3Inflation + \beta 4Lending + \beta 5Unemployment + \beta 6BOP + \beta 7CGD + \beta 8OPI + \beta 9Deposits + \beta 10Loans + \beta 11DE + \beta 12CA + \beta 13LD + \beta 14Log\_A + \mu nt$$

Table 1: Descriptive Statistics of the Variables

Variable	Obs.	Mean	Std. Dev.	Min	Max
Bank	0	-	-	-	-
Id	117	05	2.593094	1	9
Year	117	2012	3.757751	2006	2018
ROA	117	1.565983	1.165246	0.57	12.28
Exchange rate	117	0.0080504	0.0010743	0.006152	0.009619
GDP Growth	117	5.692308	2.037923	3.2	9.1
Inflation	117	7.669231	5.504363	2.2	22.6
Lending Rate	117	14.89923	2.385686	11.27	19.28
Unemployment	117	4.861538	0.7754694	4	6.5
BOP	117	262.9846	1293.597	-1488.7	2725.3
CG Debts	117	77.67692	6.361785	68.7	87.9
OPI	117	6.122479	1.795998	2.48	19.6
Deposits	117	66.20376	18.68069	7.57	84.09
Loans	117	63.89231	8.208445	38.01	79.66
DE	117	12.9694	6.132787	1.65	31.76

Table 2: Results of the ROA model

VARIABLES	**(1)**	**(2)**	**(3)**
ROA	OLS	Random effect	**fixed effect*
exrateusd_d	126.3	27.26	-56.04
	(0.723)	(0.180)	(-0.438)
gdpgrowth	0.0524	0.0131	-0.0210
	(1.078)	(0.309)	(-0.575)
inflation	0.0315	0.0396**	0.0479***
	(1.661)	(2.396)	(3.419)
Lending	-0.124**	-0.151***	-0.178***
	(-2.482)	(-3.463)	(-4.818)
unemployment	0.274*	-0.309**	-0.361***
	(-1.985)	(-2.543)	(-3.412)
bopusd	0.000110	0.000110*	0.000112**
	(1.623)	(1.889)	(2.318)
cgdebts_d	0.0292	0.0247	0.0227*
	(1.631)	(1.612)	(1.777)
Opi	0.447***	0.517***	0.598***
	(10.65)	(13.17)	(16.79)
deposits	-0.00813	-0.00966	-0.00760
	(-0.893)	(-1.044)	(-0.782)
loans	0.0146	0.00918	0.00230
	(1.352)	(0.903)	(0.250)
de	0.00519	0.0186	0.0564***
	(0.405)	(1.256)	(2.818)
ca	0.00189	0.00989	0.0241
	(0.0646)	(0.385)	(1.093)
ld	0.310**	0.258*	0.167
	(2.272)	(1.959)	(1.366)
loga_d	-0.110	0.879	1.501
	(-0.0806)	(0.732)	(1.469)
Constant	0.652	1.070	1.006
	(0.496)	(0.865)	(0.813)
Observations	108	108	108
R-squared	0.820		0.898
Number of id		9	9

Note: t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3: Results of the ROE model

VARIABLES	**(1)**	**(2)**	**(3)**
ROA	OLS	Random effect	**fixed effect*
exrateusd_d	958.2	958.2	40.76
	(0.626)	(0.639)	(0.0289)
gdpgrowth	1.033**	1.033**	0.668
	(2.460)	(2.477)	(1.665)
inflation	0.00563	0.00563	0.0827
	(0.0466)	(0.0352)	(0.546)
Lending	-0.532	-0.532	-0.771*
	(-1.415)	(-1.244)	(-1.904)
unemployment	-1.745	-1.745	-1.730
	(-1.631)	(-1.471)	(-1.484)
bopusd	0.000691	0.000691	0.000689
	(1.448)	(1.196)	(1.301)
cgdebts_d	0.172	0.172	0.115
	(1.348)	(1.126)	(0.823)
Opi	2.243***	2.243***	2.808***
	(4.566)	(6.226)	(7.160)
deposits	-0.101	-0.101	-0.103
	(-1.102)	(-1.294)	(-0.960)
loans	0.226**	0.226**	0.193*
	(2.080)	(2.435)	(1.910)
de	0.879***	0.879***	0.819***
	(7.157)	(7.990)	(3.714)
ca	0.254	0.254	0.313
	(0.915)	(1.008)	(1.290)
ld	-1.833	-1.833	-1.858
	(-1.131)	(-1.562)	(-1.376)
loga_d	3.200	3.200	17.78
	(0.411)	(0.274)	(1.580)
Constant	-5.072	-5.072	-2.789
	(-0.459)	(-0.450)	(-0.205)
Observations	108	108	108
R-squared	0.633		
Number of id		9	9

Model - 01 (ROAE):

ROA = 1.0063 – 56.044 Ex rate -0.02097GDP growth + 0.0479Inflation 0.1782Lending – 0.3614Unemployment + 0.00011BOP + 0.0227CGD + 0.5979OPI – 0.0076Deposits + 0.0023Loans + 0.0564DE + 0.02411CA + 0.1674LD + 1.5013Log_A + $\mu nt.$

Model - 2 (ROE):

ROE = -5.0724 + 958.168Ex rate + 1.033GDP growth + 0.0056Inflation – 0.5316Lending – 1.745Unemployment + 0.00069BOP + 0.1719CGD + 2.2432OPI – 0.1012Deposits +0.2255 loans + 0.8785DE + 0.2537CA – 1.8329LD + 3.2004Log_A + $\mu nt.$

According to Table 2, overall R- square value is 89.80% which implies that 89.80% of the variance in the dependent variable is explained by the independent variables. In general, the R-square value should be greater than the 50 %(0.5), so the soundness of the model is at the satisfactory level. In developing the model with the ROA, researcher have used fixed effect panel data regression as suggested by the Hausman Test.(it suggests that if the p- value of the hausman test is less than 0.05 you should continue with the Fixed effect model.) . Overall F-value is 0.000 which is less than the threshold limit of 0.05(50%). Therefore we can conclude that an overall, fixed effect regression model is suitable in arriving at conclusions. Suffian and Habibullah (2009) and Tauringana et al et al.,(2017) also argued that the FE model produces unbiased and steady coefficients.

The study found a positive correlation between the return on asset and the Inflation rate of 0.0478864 as illustrated on Table. This means that as inflation increases by 1%, ROA increases by (0.0478864%). It implies that inflation rate positively affects the bank's profitability. These findings are similar to the (Ariyadasa et al, 2017), and(Anbar and Alper, 2011) but contradictory with (Weerasinghe and perera, 2011) and Garcia and Guerreiro (2016).

According to Table 2, the research found a negative relationship between the Return on Asset (ROA) and the Exchange Rate, with a correlation coefficient value of -56.044. This negative correlation indicates that the Exchange Rate has a negative impact on a bank's profitability. The validity of each explanatory variable is determined by its individual p-value, with a benchmark rule of 0.05. Therefore, the statistically verified relationship between Exchange Rate and bank profitability is confirmed as the individual p-value is below this threshold (marked as stars in the table). These findings are in contrast to the Trindade and Garcia (2018) and Garcia and Guerreiro (2016).

There is a negative correlation between GDP growth and ROA, as shown by the correlation coefficient value of -0.0209712. This result contradicts previous empirical studies. On the other hand, the research found a positive correlation between ROA and inflation rate with a correlation value of 0.0478864. This result suggests that inflation rate has a positive effect on bank profitability, as confirmed by the individual p-value of 0.001, which is lower than the benchmark value of 0.05. Similarly, the

negative correlation between Lending Interest Rate and ROA, with a correlation coefficient value of -0.17816, is confirmed by the individual p-value of 0.001, indicating a statistically significant relationship. These findings are parallel with Anbar and Alper (2011), and Ashraf and Massod (2012), and Trindade and Garcia (2018), but in contrast to the Perales et al (2014), Garcia and Guerreiro (2016), Weerasingha and Perera (2013), and Ariyadasa et al (2017) findings.

However, the research showed a negative correlation between ROA and Unemployment ratio, with a correlation coefficient value of -0.3614382. Although this result indicates that unemployment ratio negatively affects bank profitability, the individual p-value of 0.001 suggests there is no statistically significant partnership/connection between ROA and unemployment ratio. These findings are in accordance with the Abreu and Mendes (2002) findings.

In addition, the research revealed a positive correlation between ROA and the Balance of Payments, with a correlation coefficient value of 0.0001119. The individual p-value of 0.023 confirms a statistically significant relationship between ROA and the Balance of Payments, whereas the positive correlation between ROA and Central Government Debt, with a correlation coefficient value of 0.0226985, is mathematically insignificant, as confirmed by the individual p-value of 0.079.

Furthermore, the research found a positive correlation between ROA and Operating Margin, with a correlation coefficient value of 0.5979026, which is statistically significant, as confirmed by the individual p-value of 0.000. However, there is no statistically significant relationship between ROA and Deposits Ratio or Loans to Total Assets Ratio, with correlation coefficient values of 0.0076039 and 0.0023037, respectively, and individual p-values greater than the threshold value of 0.05. Such findings are consistent with Al-Harbi (2018) and Bourke (1989) but in contrast to Athanasoglou et al., (2005) and kengatharan and Sugnya (2018) findings.

Similarly, the positive correlation between ROA and Debt to Equity Ratio, with a correlation coefficient value of 0.0564472, is statistically significant, as confirmed by the individual p-value of 0.006. However, the research found no statistically significant relationship between ROA and Capital Adequacy Ratio or Loans to Deposits Ratio, with correlation coefficient values of 0.0241068 and 0.1673617, respectively, and individual p-values greater than the threshold value of 0.05. Such findings are parallel with Ashraf and Masood (2012) findings.

In model two (Table 3), by contrast to the previous model in this study, the exchange rate and the GDP growth indicated a positive correlation value of 958.1673 and 1.03331 respectively between the Return on Equity. It verifies that the exchange rate and the GDP growth both change in the same direction with ROE. However, here also, the Inflation rate indicates a positive correlation of 0.0056283 between the ROE and it is in line with the previous model as well as, the above-mentioned previous outcomes as well. The lending interest rate showed a negative correlation of 0.5315962 with the ROE, which sounds like it moves vice-versa with the ROE. The unemployment rate recorded a negative correlation value of 1.744689 with the ROE

as well. BOP and CG debts indicated a positive correlation of 0.0006909 and 0.171878 respectively with the ROE.

When it comes to the bank-specific determinants, Loans to assets ratio, Debt to equity ratio, Capital adequacy ratio and Asset size have shown a positive correlation of 0.2255025, 0.8785433, 0.2536969, 3.200385, respectively with the Return on equity. However, the Loans to deposits ratio recorded a negative correlation of 1.832856 with the banks' profitability. As per the individual probability values of each of the independent variables, Exchange rate, Inflation rate, Lending interest rate, Unemployment, Balance of payments, central government debts, Deposits ratio, Capital adequacy, Loans to deposits and Asset size were indicated statistically insignificant relationship with the ROE with 95% confidence level. Workout experienced that, the GDP Growth rate, Operating margin, Loans to assets ratio, and Debt to equity ratios were only statistically significant with the ROE. As per the statistical thresholds ROE model was statistically sound. As per the hausman test model should continue with random effect but again random effect should compare with the OLS method by doing Breusch and pagan Lagrangian multiplier test as probability value was greater than 0.05 ROE model continue with OLS results.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

The research is focused on bank specific and macroeconomic profitability determinants of commercial banks in Sri Lankan context. While the majority of the research outcomes are consistent with previous literature, some findings contradicted fundamental concepts, such as the effect of GDP growth rate on profitability. Additionally, lending interest rates showed converse results with previous studies. This research extends the existing literature by employing the Central government debt. Balance of payments as external determinants which aren't used in parallel studies.it is found that, both BOP and central government debt are positively as well as significantly correlated with ROA as well as with ROE. Also debt to equity ratio was also not within existing studies and it indicated a positive but insignificant relationship with ROA while it showed a positive significant relationship with ROE model. There is not a study regarding bank profitability which considers both bank specific and macroeconomic forces sufficiently by collecting data over a decade as this study in Sri Lankan context. The study's importance lies in its demonstration of the importance of not only bank-exclusive but also macroeconomic factors on bank profitability, making it valuable for policymakers, investors, and stakeholders in financial institutions.

5.2 Recommendation

The study revealed a strong negative correlation between exchange rates and bank profitability, indicating that banks need to enter into proper hedging contracts to stimulate profits or reduce losses. Inflation, balance of payments, and government debts were found to marginally intensify bank profits, and managing assets had a

strong positive impact on profitability. Banks also need to maintain a suitable balance of liquidity and leverage to stimulate profitability.

5.3 Future Research Studies

The main objective of this academic work is to examine the interactions between macroeconomic and bank-related indicators on the profitability of commercial banks across the Island Nation. Future studies could expand the sample size and timeline of data to verify if the results are similar or contrast with this study. Furthermore, future studies could include additional macroeconomic and bank-exclusive variables to test their impact on bank profitability. The study can also be expanded to cross-country studies by taking into account various geographical territories.

Future studies could also use alternative proxy measures/variables to indicate bank performance instead of ROA and ROE. Other potential measures include Net Interest Margin, Sales to Assets ratio, Gross profit margin, and Net profit margin. Further explanatory variables can also be added depending on the specific objective of future research studies.

Moreover, future researchers could use alternative data analytical methods such as Auto regressive distributive lags (ARDL), Vector autoregression (VAR), or generalized linear model (GLM) to obtain outcomes that may differ slightly from this study. Additionally, the current study could be broadened by including one or more dummy variables for the existing model. Qualitative profitability Factors/determinants that could stimulate bank profitability could also be added, as most empirical studies, including this one, have primarily focused on quantitative factors.

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Department of Banking & Finance
Wayamba University of Sri Lanka

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EXPLORING THE POST-COVID PATHWAY OF MICROFINANCE ON WOMEN'S EMPOWERMENT

B B Tharanga
D G S Abeygunawardane
S N R F Dias
B G D N D Wijerathne

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Abstract

Having access to microfinance institutions in Sri Lanka, Poor women in the country have opened up to diverse microfinance services and supported them in growing economically while enhancing gender equality, health, level of education, etc. Microfinance institutions provide both financial and non-financial services and it has a significant effect in eradicating poverty and empowering women. With the effect of the COVID-19 crisis, almost all the sectors were severely affected in every aspect and the poor women of the country was one of the key parties. Thus, the primary aim of this study is to explore the post-COVID pathway of Microfinance on Women's Empowerment. Concerning the study, Sri Lankan microfinance services can be classified into five categories: micro-credit, micro-savings, micro-insurance, business support, and skills development. This study focused on determining the effect of micro-credit, micro-savings, micro-insurance, and training on women's empowerment after the COVID-19 pandemic. The study adopts a quantitative research methodology to explore the impact of microfinance on women's empowerment. An empirical investigation was carried out among a sample of 100 women selected in the Kurunegala District of Sri Lanka who were receiving microfinance services and training programs. A self-administered questionnaire was the key data collection method, which had been built on a five-point Likert scale. The data were analyzed with the aid of the SPSS Statistical Package. Correlation and Multiple Regression analysis were the key statistical techniques used to test the hypothesis. The findings have confirmed that micro-credit, micro-savings, and training have a significant positive impact on women's empowerment after the COVID-19 crisis where micro-insurance was not statistically significant. Based on the results, training offered by microfinance institutions for these poor women to sharpen up their income-generating mechanisms from obtaining microfinance services has the highest impact in empowering them. Thus, the study contributes key microfinance factors to empower women economically, socially, and politically which would in turn create a social implication of eradicating poverty and economic development after the COVID-19 crisis.

Keywords: Micro-Credit, Micro-Insurance, Micro-Savings, Post-COVID, Training

B B Tharanga *Email: buddhinith@wyb.ac.lk*
(Corresponding Author) *Tel: +94 77 7471 921*
Department of Banking & Finance, Wayamba University of Sri Lanka *https://orcid.org/0009-0003-5223-1361*

D G S Abeygunawardane *Email: santhachi@wyb.ac.lk*
Department of Banking & Finance, Wayamba University of Sri Lanka

S N R F Dias *Email: fiona@wyb.ac.lk*
Department of Banking & Finance, Wayamba University of Sri Lanka

B G D N D Wijerathne *Email: ndilruwijerathna@gmail.com*
Department of Banking & Finance, Wayamba University of Sri Lanka

1. INTRODUCTION

Social exclusion, poverty, and gender inequities are the pressing issues experienced globally (Lee & Huruta, 2022). Microfinance is positioned prominently as a key enabler in overcoming many of them. Especially in developing countries like Sri Lanka, Microfinance has gained increasing popularity as a mechanism for the eradication of poverty and the empowerment of women (Mukendi & Manda., 2022). Limited access to formal financial services by vulnerable units like entrepreneurs, small businesses, and poor households within the traditional banking services was a key problem that restricted the growth of these units in many aspects. Microfinance therefore serves as an alternative path to financial inclusion for those who are too poor to be served by regular banks and allows the population with a lack of financial resources to access credit, savings, and other crucial financial services. Microfinance is anticipated to enhance and strengthen the income-generating activities and capacities of low-income individuals. Therefore, it is anticipated that microfinance will lead to an improvement in low-income people's living situations while also enabling them to actively participate in the nation's economic growth.

The role of women is crucial if society and the economy of a region are to reach their full potential. It is virtually difficult for a region to see economic growth without the involvement of women in its economic operations (Doepke., 2019; Singh., 2021). According to most statistics, women make up half of the population in the world (World Population Prospects, 2019). Regardless of the above facts, women's unemployment rate is higher than men's in practically the world (International Labor Organization report, 2017). Like many other nations, Sri Lanka offers microfinance services with an emphasis on women. Turning into the Sri Lankan context concerning women and their contribution to the nation's economy, the Household, Income, and Expenditure Survey, 2019 conducted by the Department of Census and Statistics reveals that 25% of the population lives in homes headed by women in Sri Lanka. According to the Sri Lanka labour force survey annual bulletin 2021 has emphasized that female employment status is 33.3% and among that own account worker rate of 25.3% and the contributing family worker rate is 75.9%. However, the female employment rate has been shown to be 92.1% of women. In a context where the world economy is headed by women, The United Nations has identified women's empowerment as one of its top priorities for the coming years. (Hasan, 2022), But on the contrary, the COVID-19 pandemic has had a detrimental impact on entrepreneurship in the last decade. According to O'Donnell et al. (2021), women-owned businesses have been more likely to get close since the spread of COVID–19.

The economic shutdown under the global pandemic, COVID-19 has severely impacted every human activity where the micro, small, and medium enterprises, and poor households were affected badly the most (Bartik, 2020). The effects of a crisis have never been gender-neutral (Liu et al., 2021). O'Donnell et al. (2021) report that women were the most affected gender by the pandemic, which resulted in a disproportionate effect on women's employment, working hours, and wages compared to males. According to Singh (2021), the COVID-19 pandemic caused an increase in the poverty level among women. The report issued by Cherie Blair Foundation for Women (2020), based on a sample gathered from women in 32 low

and middle-income earning countries, reveals that the COVID-19 pandemic has forced 38. 5% of women-owned firms shut down and 83.8% of women have paused a negative impact on their business amid the inequitable access to finance. COVID-19 made women-led businesses for longer closure periods when compared to men-led firms. The disproportionate gendered implications in economies were higher in developing economies. (Liu et al., 2021). Thus lower levels of performance in business activities caused lower access to bank loans for the businesses led by women, and further to employment layoffs. This circles back to women, as layoffs are especially focused on women employees. In addition to the above the continuous lockdowns burdened the women with higher household responsibilities, which hinder their level of productivity despite the industry. (Liu et al., 2021; Power, 2020). The nature of employment, the amount of savings, and the industry in which they operate are some factors that can be held accountable for this disparity (Global Innovation Index., 2020).

Nevertheless, microfinance facilities have become the aid to overcome the drawbacks faced by small and medium entrepreneurs during the pandemic, especially for women-led businesses. This is proven in two studies that focus on how gender differences influence the accessibility to credit. The study by Hewa-Wellalage et al (2022), stated that there is no evidence on the gender gap in access to finance during the pandemic by taking bank credit and microfinance into account as funding sources. The contrary was reported in the study by Liu et al. (2021) where only bank credit was the funding facility considered. Microcredit has also aided poor women to engage in diversified livelihood activities, which has enabled them to create a stable flow of income thus strengthening coping strategies based on livelihoods (Naz & Doney., 2022). Going beyond the financial perspective, microfinance facilities enable women to engage in business, hence increasing the bargaining power within the family. (Mwale et al., 2021). The empirical literature in Sri Lanka contains several empirical studies on the relationship between microfinance and women's empowerment, and the majority of these studies supported the assumption that microfinance had a good impact on women's empowerment (Perera., 2020; Chandradhasa., 2019). Thus without much argument, it can be accepted that microfinance truly plays a significant role in women's empowerment. The special relationship between women and microcredit has been in the discussion for a long time. (Alshammari., 2021; Bernard. 2016; Mohammad., 2021).

However, the consequences of COVID-19 on women and the role of microfinance in overcoming such consequences still need in-depth investigations. Even though there are empirical studies carried out after COVID-19 in the global context (Karim, 2021; Mustafa, 2021) there is a significant research gap within the Sri Lankan context. With the effect of the COVID-19 pandemic followed by the worst economic crisis in the country, have understood the importance of microfinance services in empowering the living of disadvantaged units like poor women in Sri Lanka. Thus, the current study focused on microfinance factors that significantly affected Women's Empowerment after the COVID-19 pandemic and aimed to investigate the relative impact of micro-credit, micro-savings, micro-insurance, and training on Women's Empowerment. Furthermore, this study will eventually be useful to not only local institutions but

other international micro-financial institutions to understand and compare the factors affecting women's empowerment in different contexts after the COVID-19 pandemic. The study was only conducted on conveniently chosen women from each category of women who had the highest rates of microfinance and female empowerment. Micro-credit, micro-savings, micro-insurance, and training were the four independent factors that drove the research. Only one dependent variable specifically, women's empowerment was included.

2. LITERATURE REVIEW

2.1 Empirical literature

2.1.1 Women empowerment

Women's empowerment is viewed as a multifaceted process that enhances a person's ability and abilities to make decisions and translate those decisions into desired actions and outcomes (Hashemi & Schuler, 1996). The majority of the time, microfinance institutions' primary target market is women (Okesina, 2022). Micro-credit is designed to empower women and provide them with the chance to start their own companies, boosting the economies of both their households and their communities. The process of improving women's economic, social, and political status in society is known as "empowerment. The empowerment and autonomy to improve health, social, political, and economic status are viewed as a force that enabled women to earn income through non-traditional sources along with the achievement of self-resilience, equal access to the labor market, and social security networks. (Mukendi & Manda, 2022; UNFPA, 1994).

2.1.2 Micro-credit

Micro-credit is a well-known contributor to the empowerment of women. Micro-credit is a crucial instrument for empowering women since it encourages the development of entrepreneurial abilities in women with low income Additionally, (Yogendrarajah, 2012) described micro-credit as raising people's quality of life by giving them a little loan for a brief time. He also articulated micro-credit dimensions through the research journal, such as the credit amount, loan disbursement, and repayment duration.

Hashemi, (1996) Study on the effects of micro-credit and microfinance programmes on the lives of women, identified micro-credit as a key element in the empowerment of women. Evaluated women's empowerment using a range of variables, including their political awareness, mobility, and purchasing power. According to the report, women's empowerment and access to microcredit are positively correlated. Rathiranee, (2017) argued that microcredit is a base for women's empowerment by improving economic activities and self-employment, helping women meet their practical needs, increase their efficacy in their traditional roles, and gain respect and achieve more in their socially defined roles. This may then lead to increased esteem and self-confidence, which may contribute significantly to a woman's ability and willingness to confront social injustice (Aytekin, 2019).

2.1.3 Micro - Savings

Recently, the mobilization of savings has been acknowledged as a significant driver in microfinance. According to Perera (2020), microfinance savings and women's empowerment are positively correlated. An investigation by Ramajeyam (2016) looked into how microfinance interventions affected the empowerment of women business owners in Jaffna. The findings demonstrate that micro-savings have a considerable and positive impact on women entrepreneurs' empowerment. The effect of microfinance services on clients' entrepreneurial success was examined by Bernard (2017). According to the study, micro-savings are associated positively with women's business success.

2.1.4 Micro-Insurance

Micro-insurance serves as an aid to poverty reduction and social protection. It provides a financial shield to the poor by serving as an additional source of recovery and reducing the vulnerability among the poor to unexpected losses. (Arun et al. 2012). Through methodical risk management among the rural poor, micro-insurance could result in a win-win situation that combines commercial profit with the social benefits of eradicating poverty (Amudha, Selva Bhaskar, & Motha, 2014). Micro-insurance offers different types of insurance coverage such as life, crop, weather, and health (Arun et al., 2012) for low-income persons in return for recurrent premium payments according to the likelihood and expense of the risk involved. The source of financial services for low-income self-employed individuals is micro-insurance (Gaurav, 2007). According to Chandrarathna (2021), they have proved that micro-insurance has a significant positive impact on the entrepreneurial success of women in the Colombo District.

2.1.5 Training

A sizable number of clients who had their firms launched with the help of MFIs remarked how the training they had received had improved their operations. According to their study, the majority of the clients did not comment, but roughly 45% of them said they were happy with the business development services offered by their company. The fact that the training facilities had been made available to them was the key factor in their satisfaction. The empowerment of women is found to be positively correlated with education level (Sridevi, 2005; Khan, 2011; Sheikh, 2015). As a result, training programs offered by microfinance organizations likely have a positive impact on the empowerment of women. As a result, training is advantageous to microfinance clients and has a positive impact on business growth (Cheston, 2002). (Hameed, 2017). Furthermore, it is suggested by (Haider S. A., 2017) that the training or skill development programs offered by microfinance institutions have an impact on the economic and social empowerment of women.

2.2 Theoretical literature

2.2.1 Vicious Cycle of Poverty Theory

Nurkse introduced this theory (1971). This theory explains how micro-credit can be used as a tool for women's empowerment by focusing on how a credit investment

framework is built. According to the hypothesis, the supply-side advocates believe that there is a limited capacity to save because of the low level of real income.

2.2.2 Human Capital Theory

According to Becker's (1993) human capital theory, education and experience help people gain the skills necessary to be productive. Knowledge obtained via education and training is a resource that is unevenly distributed among people and is therefore essential to comprehending variations in opportunity recognition and exploitation. Despite being surrounded by a variety of business options, some women nevertheless live in poverty and are unemployed due to a lack of training and understanding in entrepreneurship. According to the idea presented above, education, experience, and skills aid in the identification of market-created business possibilities and foster empowerment. Through training, female entrepreneurs can increase their knowledge. Therefore, support their creative and inventive ideas that can grow small business companies by producing new information, goods, services, and production methods at a lower cost, which can give them a sense of empowerment.

2.2.3 Microfinance and Women's Empowerment

Microfinance organizations have continually fought against poverty throughout history. Nevertheless, they have had to adjust to the new environment in light of the COVID-19 pandemic. Increasing women's access to financial resources, income-generating assets or activities, saving, financial decision-making power, and economic independence are all outcomes of microfinance (Mayoux, 2008). "Microfinance has demonstrated its efficacy as a tool against poverty and hunger in numerous countries" (John Nijirani, 2015). To reduce poverty, microfinance initiatives have dominated (Beisland et al., 2020). The goal of the expansion of microfinance is to encourage the impoverished to become entrepreneurs by providing them with sufficient financing to raise their level of living (Tang et al., 2020; Mustafa et al., 2018).

According to scholars, there are various reasons why women should be the focus of microfinance programs that aim to reduce poverty and empower women. Based on the Human Development Report (2014), more than 1.3 billion people worldwide, 70% of women live on less than $1 a day and lack access to banks and other financial institutions in developing nations, especially in rural areas. In their study on promoting empowerment through microfinance in Sri Lanka, Tilakaratna, Galappattige, and Perera (2005) found that microfinance plays a significant role in the lives of the poor who are motivated to start their businesses. Savings, microcredit, and training are just a few of the essential services offered by microfinance companies. Microfinance institutions are a crucial tool for economic development aimed at assisting women and those with lower incomes (Duflo, 2012).

Arora and Meenu (2011) emphasize that microfinance significantly contributes to women's empowerment. Their access to loans for home improvements, children's education, and marriage has become beneficial to their families as well. Also it has helped women develop better-saving habits. Nader (2008) asserts that microfinance is crucial to women's empowerment, particularly given their propensity for family

well-being and child education. Access to microfinance for women is viewed as a requirement for eradicating poverty and empowering women (Mayoux, 2006)

The beneficial effects of microcredit, microfinance savings, and training can be found in many recent studies done recently focusing on women empowerment (Ali and Hatta, 2012; Perera 2020; Haider, Asad, and Fatima, 2017). Therefore, it is likely that the services provided by microfinance institutions, such as microcredit, savings, and training programs, have an impact on the empowerment of women since they are closely related to both financial capital (microcredit & savings) and human capital (training programs of microfinance institutions).

3. METHODOLOGY

The quantitative data analytical methods were applied to analysis the quantitative data of the study. This study has used primary data to achieve its research objectives. Sri Lanka has approximately 250,000 women who engage in micro enterprise which represent only 25% of SMEs in the country. Due to high informalization among the micro enterprises, statistics in Provincial Level, District Level or any other level on women led businesses were not available. Thus, to identify the study population an approximation was made using published poverty data in 2017 by Census and Statistics Department and selected the women who engage in micro enterprises in the Kurunagala District since it records the highest income disparity with the highest Gini coefficient for real per capita expenditure (Department of Census and Statistics, 2017). Consequently, a sample of 100 women who engage in micro businesses in Kurunegala District were drawn using a convenient sampling technique. The researcher used structured questionnaires to collect the data and questions were designed representing the main variables under the study. Since the key objective of the research is to identify the impact of microfinance on women's empowerment, correlation and multiple regression analyses were conducted. A descriptive analysis was conducted to identify the demographic characteristics of the sample.

To test the relationship indicated in the conceptual framework, the concepts of microfinance and women empowerment were operationalized using variables to represent each concept which was followed by indicators and questions covering each variable. The questions were designed covering the different indicators of the variables. The responses to the questions were scaled using a five-point Likert scale. Four (04) variables were chosen to represent micro finance. First variable Microcredit was measured using questions which indicate eligibility, Loan size, application procedures and repayment schedule (Banerjee, 2010; Adhiambo, 2015; Yogendrarajah, 2012; Pitt, 2003). Secondly micro savings was measured using indicators of interest rates, level of initial deposit, confidentiality, accessibility of providers (Sultana, 2010; Laha, 2015; Ranasinghe, 2020). Next variable, micro-insurance was measured using indicators of the risk, claim system and coverage (Thilakasiri, 2019; Banerjee 2010; Adhiambo, 2015). Finally, the factor training on business was measured using eligibility to be trained, accessibility and quality of the training (Mogashoa, 2014; Raven & Quan, 2015; Ali, 2012).

3.1 Conceptual Framework

This study sought to find out the microfinance products that significantly affected women's empowerment after the COVID-19 pandemic and also the sub-questions to check whether micro-credit, micro-savings, Micro-insurance, and Training facilities have affected Women's Empowerment. Women's empowerment is seen as the dependent variable, with microfinance as the independent variable.

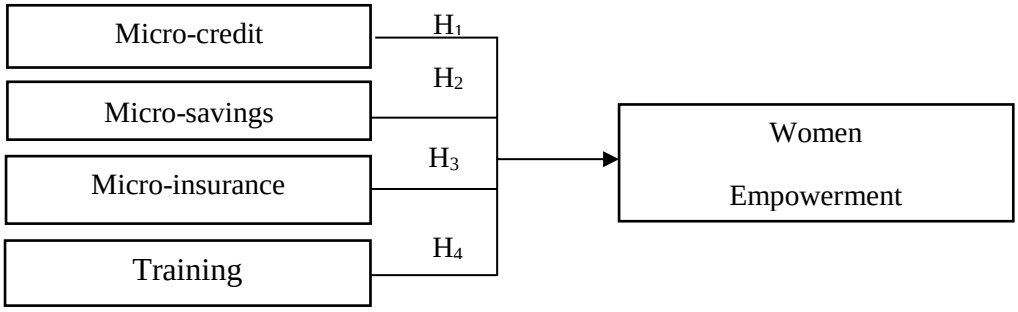

Figure 1: Conceptual Framework

3.2 Hypotheses

H1: There is a significant positive impact of Micro-credit on Women's Empowerment after the COVID-19 pandemic.

H2: There is a significant positive impact of Micro-savings on Women's Empowerment after the COVID-19 pandemic.

H3: There is a significant positive impact of Micro-insurance on Women after the COVID-19 pandemic.

H4: There is a significant positive impact of Training on Women's Empowerment after the COVID-19 pandemic.

To test the relationship indicated in the conceptual framework the concepts of microfinance and women empowerment were operationalized as given in Table 2.1 below.

4. RESULTS AND DISCUSSION

4.1 Demographic Factor Analysis

According to the Demographic factor analysis, the age group of 18 to 25 represented the largest percentage of respondents (46%), while the age group of 26 to 35 represented the second-largest percentage (38%). In comparison to the minimal percentage of 40-year-olds, where 2% of business-women fall, 14% of respondents were in the 36-45 age range. 52%of business women who responded to the survey were employed, which is the highest percentage of employees. 47% of the sample identified as self-employed. The majority of the women included in the sample were conducting their businesses related to the production of cosmetics, beauty culture,

cakes, and other fast-food items, producing sweets; agriculture-based products, clay and plastic products, clothing, textiles, jewelry-related businesses, and retail shops.

4.1.1 Reliability analysis

According to the results of Cronbach's alpha value of 0.864, it could be proved that 32 questions under 05 variables were in the accepted range having a value of more than 0.7. It indicates that the internal reliability of the scale is very high.

Table 1: Overall Cronbach's Alpha

Cronbach's Alpha value	N
0.864	5

4.1.2 Correlation Analysis of Independent and Dependent Variables

Table 2 represents the correlation diagnostic table as follows.

Table 2: Correlation Diagnostics

		Women Emp:	Micro-credit	Micro-insurance	Micro-savings	Training
Women Empow:	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	100				
Micro Credit	Pearson Correlation	.676**	1			
	Sig. (2-tailed)	.000				
	N	100	100			
Micro Insurance	Pearson Correlation	.396**	.502**	1		
	Sig. (2-tailed)	.000	.000			
	N	100	100	100		
Micro Savings	Pearson Correlation	.697**	.625**	.392**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	100	100	100	100	
Training	Pearson Correlation	.701**	.621**	.432**	.589**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	100	100	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed)

According to the correlation analysis women empowerment has a positive and statistically significant correlation with micro-credit, micro-savings, and training. The correlation coefficients are 0.676, 0.697, and 0.701 respectively. Although micro-insurance has a statistically significant and positive correlation with women's empowerment, the correlation coefficient is weaker than the other independent variables. The highest correlation can be observed between training and women empowerment.

Since the correlation coefficients obtained for the correlation among the intended variables are not very high multicollinearity does not exist. Correlation analysis revealed the direction of the relationship among the variables is positive and statistically significant.

Table 3: ANOVA Table

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	41.885	4	10.471	43.518	.000b
Residual	22.859	95	.241		
Total	64.744	99			

Predictors: (Constant), Training, Micro-insurance, Micro-savings, Micro-credit

The findings indicated in Table 7 show that the impact on microfinance and women's empowerment after the impact of the COVID-19 pandemic was positive and statistically significant ($F=43.518$; $P<0.05$). Therefore, the micro-credit, micro-insurance, micro-savings, and training investigated were relevant to women's empowerment in Sri Lanka after the COVID-19 pandemic period.

4.2 Overall Model

The model summary for the regression analysis revealed that the model has a higher ability to explain the variations in the dependent variable. According to the adjusted R square model made up of micro-credit, micro-insurance, micro-savings, and training can explain 64.7% of the variation in women's empowerment after the COVID-19 pandemic. The Durbin Watson value of 2.0 indicates that there is no autocorrelation found in the regression model.

Table 4: Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson Value
.804a	.647	.632	.491	2.026

The model summary for the regression analysis revealed that the model has a higher ability to explain the variations in the dependent variable. According to the adjusted R square model made up of micro-credit, micro-insurance, micro-savings, and training can explain 64.7% of the variation in women's empowerment after the COVID-19 pandemic. The Durbin Watson value of 2.0 indicates that there is no autocorrelation found in the regression model.

Table 5: Regression Coefficients Analysis of Overall Model

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	-.180	.220		-.821	.414
Micro-credit	.237	.082	.256	2.884	.005
Micro-insurance	-.019	.088	-.015	-.216	.830
Micro-savings	.360	.089	.336	4.056	.000
Training	.471	.112	.350	4.205	.000

Dependent Variable: Women Empowerment

The constant obtained for the model is -0.180. This value reveals the impact women's empowerment has from variables other than the variables considered tested model. According to the regression analysis, microcredit has a statistically significant positive impact of 0.237, and micro-savings have a 0.360 positive coefficient whereas training has a positive coefficient of 0.471, which was statistically significant at a 5% level of significance. This reveals that micro-credit, micro-saving, and training have statistically significant positive impact on empowering women after the COVID-19 pandemic period. Consequently, the null hypothesis H1, H2, and H4 can be accepted and conclude that all these three variables which represent the microfinance service in Sri Lanka positively contribute towards women's empowerment during the pandemic.

According to multiple regression results the researcher can conclude that micro-credit, micro-savings, and training created a positive and statistically significant impact on women's empowerment after the COVID-19 pandemic period whereas the impact of micro-insurance proved to be not statistically significant on women's empowerment during the selected sample of the study. So the regression model has been formulated as follows.

$$\mathbf{Y = - 0.180 + 0.237X1 - 0.019X2 + 0.360X3 + 0.471X4}$$

The analysis revealed that concepts that represented microfinance imposed a positive impact on women's empowerment after the COVID-19 pandemic period. Microcredit proved to have a positive impact on women's empowerment. This finding is in line with the previous studies by Ali (2012); Hashemi (1996); Awan (2015); Idris (2015); Alnaa (2015). The positive impact can be attributed to the enhancement of quality of life as stated by Yogendrarajah (2012). Also in another angle micro credit has acted as a force to reduce poverty (Idris, 2015), this study further proved that the role of microcredit has remained unchanged by acting as a positive force to empower women-led enterprises to survive after the pandemic.

Micro savings which was used as the second measure of the concept of microfinance reported a positive impact on women's empowerment. This finding complies with the previous studies conducted by Perera (2020); Ramajeyam (2016); Bernard (2017). Micro-savings improve the success of the micro-enterprise (Bernard, 2017) which in turn acts as a source of empowerment to the women entrepreneurs through the success of the business. The current study also agrees with this pattern of relationship between micro-savings and thus proves that micro-savings have remained a contributor to boosting women's empowerment after the pandemic.

Micro-insurance is a type of financial arrangement used to protect low-income clients against specific risks in exchange for reoccurring premium payments corresponding to the likelihood and cost of the risk involved. Although the current study revealed a positive impact of micro-insurance on women's empowerment, it lacks statistical evidence to support the said relationship. Nevertheless, previous studies such as Amudha et al (2014) stated that micro-insurance could produce a win-win situation to reduce poverty through methodical risk management (Chandrarathna (2021) has produced a similar result which again proved that micro-insurance created a positive

impact on women entrepreneurs. Some research such as Bernard (2017) has stated that there is no connection between micro-insurance and the empowerment of women, which supports the findings of the current study.

The analysis revealed that the training facilities provided by the microfinance institutions act as positive and a statistically significant force to empower women-led micro-enterprises. This is in line with Sridevi (2005); Khan (2011); Sheikh (2015); Cheston (2002). According to Thilakeratne (2005), the training helps the micro-enterprise owners to uplift information and skills necessary for business hence making them satisfied. Training encourages and makes space for business expansion and all these positive forces drive the empowerment of micro-enterprises (Sridevi, 2005) and probably women-led businesses as well. The current study provides ample evidence to prove the above even during the pandemic.

Despite the statistically insignificant relationship revealed between micro-insurance and women's empowerment, all other variables of microfinance proved to be promoters of women's empowerment as already proved by previous studies based on a variety of contexts. However, the present study provides statistically significant evidence to prove that microfinance has remained a positive contributor to empowering women-led micro-enterprises even within the negative context created by the pandemic.

5. CONCLUSION

Microfinance Service is tied up with multiple facilities to serve the underserved and disadvantaged categories such as poor and low-income earners, micro, small and medium enterprises, etc. It has been empirically found that more than half of the women in the world are excluded from the formal financial system and operate in informal financial services to overcome their burning financial issues and this has trapped them back in the poverty cycle (Findex Data, 2017). The condition has further worsened with the impact of the COVID-19 pandemic followed by the economic crisis in Sri Lanka (The World Bank Group, 2023). This study was conducted to measure the impact different microfinance products have on women's empowerment after the suffering of the COVID-19 pandemic in Sri Lanka. Starting from the late 1980s the World Bank and donor agencies have recognized microfinance as a strategy for poverty reduction and women empowerment (Tanima et al., 2020). The United Nations Office for Coordinating Humanitarian Affairs has identified women empowerment as a key theme and has a set of policies for the 2021-2025 period (Unochr, 2022). Despite all efforts made towards the target women's empowerment, the COVID-19 pandemic imposed a huge threat to the progress achieved on women's empowerment. (Hewa-Wellalage et al., 2022). Through the investigation of past literature and policies of the leading organizations formed by considering microfinance as a key strategy to poverty reduction and women empowerment, a gap existed in knowledge regarding the role played by microfinance after the bad impact made by the COVID-19 pandemic on women's lives. COVID-19 poses a huge threat to all small and medium-scale entrepreneurs, especially when considering women-led businesses (Liu et al., 2021). This study also sought to fill the gap that existed

concerning the lack of studies based on the Sri Lankan scenario on microfinance and its impact on women's empowerment.

Since it was intended to measure the impact of microfinance on women's empowerment, researchers used correlation to identify the relationship among the variables and regression to estimate the impact the independent variables impose on dependent variables. Through the statistical analysis, it was revealed that micro-credit, micro-savings, and training have a statistically significant and positive relationship with women empowerment, whereas micro-insurance reported a relatively weaker but statistically insignificant relationship. These findings confirm the findings of Mwale et al., (2021), who found that micro-credit leads toward women's empowerment by allowing women to engage in business activities which in turn reduces domestic violence and findings are compatible with the Bangladesh context as well revealed by Naz & Doney (2022).

All businesswomen who are ready to launch their enterprises can use the current study findings as a resource, and it will aid in the efficient operation and growth of those enterprises. Microfinance institutions can be used to establish new facilities for the growth of women's entrepreneurship and to sustain those facilities so that such firms can survive and grow (Sharma, Mishra & Rai, 2021). It will be a good investment to get additional clients to the microfinance organizations. As Policy Recommendations Microfinance institutions should create a policy that will regulate the rate of interest charged. The most recent technology should be adopted by microfinance organizations to facilitate electronic fund transfers (Murshid & Murshid, 2022; Tripalupi, Yulianti, & Naafisah, 2023). To enable more business women to get training and gain empowerment microfinance institutions should lower the cost of training sessions or offer it as a complimentary free service for the first step to all of their clients. Further Micro-savings should be redesigned to better suit the demands of the client, making withdrawal procedures simple and should shortening the time required for follow-up withdrawals in the event of any unforeseen circumstances (Akula & Singh 2023). To encourage prudent public spending as well as the development fund, it is also vital to examine the interactions between various programs and microfinance institutions, such as those between micro-insurance and alternative risk management frameworks. Microfinance organizations should develop a product targeted primarily at enhancing the lives and businesses of female entrepreneurs (Akula & Singh 2023).

As the Recommendations for future research studies, this research study will help upcoming scholars to do research associated with a specific business area. The online approach was used during the COVID-19 pandemic (Murshid & Murshid, 2022; Tripalupi, Yulianti, & Naafisah, 2023). The online approach supported doing their business in the new approach. Therefore, study on the technological development of microfinance and women's empowerment can be done in the future (Murshid & Murshid, 2022; Tripalupi, Yulianti, & Naafisah, 2023). This research study can be conducted with the comparison between before the pandemic and after the pandemic impact of microfinance on women's empowerment. In this study, training and microfinance services were used to gauge the empowerment of women. However,

other external variables, such as infrastructure, knowledge, and education will also have an indirect impact on the empowerment of women. That can also be added in future research studies. However, it was difficult to conduct this survey with wider coverage due to the time and the cost factors associated after the COVID-19 pandemic followed by the worst economic crisis in Sri Lanka. Thus, only micro-scale female businesswomen in Sri Lanka were included in the study. Additionally, the generalization only holds true for women running small businesses. Due to the lack of business-women researcher has suggested collecting data within the country.

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Department of Banking & Finance
Wayamba University of Sri Lanka

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MONETARY POLICY FRAMEWORK IN SRI LANKA AND ITS IMPACT ON THE FINANCIAL SECTOR: A REVIEW

W M M S Werake

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Abstract

Monetary policy is a prominent stabilization mechanism often used to accomplish price and economic stability in a country. The success of monetary policy depends on the operating economic environment, the institutional framework adopted, and the choice and mix of the instruments used. The aim of this paper was to review the evolution of the monetary policy framework in Sri Lanka and its impact on the financial sector. The review is important, and monetary policy is intended to impact aggregate spending in the economy to contribute to the goals of full employment, price stability, sustainable economic growth, and balance of payments equilibrium. The paper reviewed more than twenty-five research and review papers using a thematic approach. The paper explains the historical evolution of monetary policy regimes in Sri Lanka and the reasons for adopting various monetary and exchange rate policy regimes from time to time. The review considers national and international studies on monetary policy regimes and their impact on the financial system. The paper concludes that the Currency Board could not influence the money supply in any way, and until the adoption of open economy policies in 1977 under the fixed exchange rate regimes, the Central Bank had no control over domestic inflation. The review also identifies that flexible inflation targeting is the international best practice of Central Banking, and flexible inflation targeting enables the maintenance of low inflation, thereby helping economies achieve a high and stable growth path. However, it emphasizes that it should be maintained sustainably subject to several conditions through government intervention.

Keywords: Central Bank of Sri Lanka, Exchange Rate Regime, Monetary Policy Framework

W M M S Werake
(Corresponding Author)
Department of Economics, University of Kelaniya

Email: senanik@kln.ac.lk
Tel: +94 71 9412 880
https://orcid.org/0000-0002-5431-1141

1. INTRODUCTION

Monetary policy is the process by which a central bank manages the supply and the cost of money in an economy, mainly with a view to achieving the macroeconomic objective of price stability (CBSL, 2020). Monetary policy plays an important role in the achievement of macroeconomic and financial sector stability, while an integrated financial market is essential for the rapid development (Nnanna, 2001). Monetary policy objectives traditionally include economic growth, employment, price stability, and nominal GDP. Depending on the country, monetary policy objectives, as many countries have done in recent years, place greater emphasis on the objective of price stability (Khan et al., 2002). Several Asian central banks adopt explicit inflation-targeting frameworks (morgan and Peter, 2013). In Addition, Monetary policy may also seek other objectives, including the stability of long-term interest rates and financial markets, including foreign exchange markets, and may target economic activity in particular sectors of the economy.

The Central Bank of Sri Lanka's primary goal is the maintenance of price stability. As price stability is crucially dependent on stable macroeconomic conditions, one of the core objectives of the Central Bank of Sri Lanka is therefore specified as economic and price stability. As the experiences of other countries have demonstrated, the financial system's stability is crucial in improving the economy's resilience. Hence, financial system stability was also identified as a core objective of the Central Bank of Sri Lanka. The two objectives are correlated and complement each other. Financial system stability is important, as monetary policy is transmitted through financial intermediaries to achieve price stability. Hence, the two objectives are in harmony, enabling the Central Bank to perform its main functions more effectively. The Central Bank of Sri Lanka has been given high autonomy to achieve its objectives (CBSL,2019).

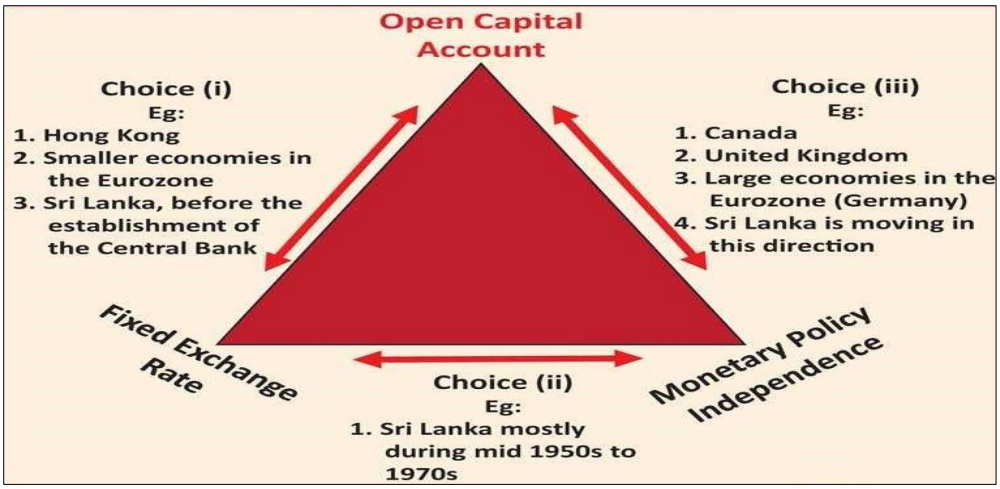
Monetary policy instruments are generally classified as either direct or indirect, Direct instruments operate under the regulatory authority granted to the central bank; indirect instruments operate as a function of the central bank's ability to issue reserve money on money market conditions. Indirect instruments are also termed "market–based instruments" since their transactions occur with financial and non-financial institutions. The most common direct instruments are administratively set interest rate ceilings, individual bank credit ceilings, and directed lending. There are three main types of indirect instruments. (1) Open market operations, (2) Central banking lending, and (3) Reserve requirements.

Countries' practices of conducting monetary policy vary, depending on macroeconomic and financial market conditions. Hence, different types of monetary policy regimes can be observed in today's world. Further, monetary policy frameworks have evolved in response to economic and financial crises and increasing trade openness and global financial integration. In determining the monetary policy framework, a monetary authority must abide by the condition of "impossible trinity," i.e., the choice between independent monetary policy, fixed exchange rate, and capital account openness (CBSL, 2019). Monetary policy transmission depends on these macroeconomic and financial market conditions and the choice of monetary policy

frameworks. The monetary policy transmission mechanism is defined as the process through which economic activities are affected by monetary policy decisions. Koop, Gonzalez & Strachan, (2009) showed that the transmission mechanism, the volatility of exogenous shocks and the correlations between exogenous shocks are all changing. According to the "impossible trinity" condition, a country cannot simultaneously have a fixed exchange rate, an open capital account, and an independent monetary policy. If the capital account is closed, monetary policy penetrates domestic demand, regardless of the exchange rate regime. On the other hand, with free capital mobility, monetary policy transmission depends on the exchange rate regime. This framework helps highlight the trade-offs faced by policymakers in small open economies and what choices they have made to resolve them (Moreno, 2011)

Based on the concept of the impossible trinity, at least three different monetary policy combinations can be made by countries depending on their macroeconomic and financial market conditions. (i)Maintaining an open capital account and a fixed exchange rate while forgoing monetary independence (ii) Independent monetary policy with a fixed exchange rate, along with capital controls (iii) Maintaining an open capital account and monetary independence, with a flexible exchange rate (CBSL,2019). Choice (i) above is essentially a fixed exchange rate regime, including a Currency Board arrangement, a dollarized economy, or a hard peg. Choice (ii) involves capital controls, which have become increasingly unpopular. Choice (iii) allows the exchange rate to float with capital account openness while enabling the Central Bank to conduct monetary policy independently. Monetary policy regimes under Choice (iii) include inflation targeting, whereas monetary targeting could be conducted under both Choices (ii) and (iii) with varying successes. Some countries attempt to conduct monetary policy using interim combinations, such as managed floating exchange rates and partially controlled capital flows [See Figure 01]. Similar to many other countries, Sri Lanka's monetary policy framework evolved from Choice (i) and moved towards Choice (iii) during the past 70 years (CBSL, 2019). The Central Bank of Sri Lanka believes that flexible inflation targeting under Choice (iii) is the most suitable monetary policy framework for Sri Lanka.

Improving the operational framework should be a central focus in countries striving to modernize monetary policy framework. Shortcomings in the operational framework and weak liquidity management are in many cases the major obstacles to effective monetary policy. A well-functioning operational framework is needed to ensure that policy objectives are achieved reliably and efficiently. Therefore, it is needed to consider factors such as liquidity risk, exchange rate, interest rates, interbank rates, and the central bank policy rate. Open market operations affect short-term interest rates, which in turn influences longer-term rates and economic activity. The key element of the Open Market Operations framework is the interest rate corridor formed by the policy interest rates which is referred to as the Standing Rate Corridor (SRC). When central banks lower interest rates, monetary policy is easing. When they raise interest rates, monetary policy tightens. Therefore, a well-managed interest rate needs to be implemented in any country.



Source: Central Bank of Sri Lanka

Figure 01: The Impossible Trinity

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Emerging economies face many challenges because of their developing financial systems and vulnerability to international capital flows. Therefore, according to experience, developing countries without developed financial systems are not capability face the economic shocks. Then, the impact and transmission of monetary policy framework on the real economy is still contentious. The literature shows that monetary policy transmission differs between developed and emerging countries mainly due to different financial market conditions. Monetary policy changes affect the real economy by changing interest rates, asset prices and exchange rates; hence, the strength of monetary policy depends on the functioning of different financial markets. Although over the last few decades there has been an increase in the number of papers examining the effectiveness of monetary policy in Sri Lanka its shows that the reliability of content is low. Therefore, this paper aims to review the evolution of the monetary policy framework in Sri Lanka and its impact on the financial sector. At this juncture, the paper focuses on the changes that took place in two main periods in Sri Lanka.

I. Period from Currency Board System to Open Economic Policy Initiative

II. Aftermath of open economic policy

The method of analyzing the facts is descriptive, as the paper is based on the available past literature related to the monetary policy framework. An extensive review of relevant information gathered from journal papers, research articles, and reports has been undertaken. The remainder of the paper is structured as follows. Section 2 presents the evolution of the monetary policy framework in Sri Lanka while discussing different aspects of monetary policies and the recent development in the monetary policy framework in Sri Lanka and the rest of the world. Finally, the paper summarizes the findings and conclusion.

2. LITERATURE REVIEW

2.1 Evolution of monetary policy framework in Sri Lanka

The central banks implement price stability through one of three operational frameworks: inflation targeting, monetary targeting, and exchange rate targeting. Of these three, inflation targeting has seen increasing adoption around the world. first in New Zealand in 1989 then reported in a growing number of advanced and emerging economies (Ghate & Ahmed, 2022), Before establishing the Central Bank of Sri Lanka (Ceylon) in 1950, the Sri Lankan monetary system was a Currency Board system whereby the Currency Board would automatically issue or retire Ceylon rupees against an equivalent value of the Indian.

The reasons cited in the Joan Exter Report (1949) for the establishment of a Central Bank in place of the Currency Board are primarily twofold: first, the need to establish an independent monetary system that can issue currency and create deposits against domestic as well as foreign assets; second, the need to establish an institution with powers to control the expansion and contraction of credit by commercial banks. Concerning the first reason, Exter (1949) shows that, as the role of the Currency Board must remain purely passive, it cannot influence the money supply in any way and thus relieve the pressure to which rapid swings in the balance of payments may sometimes subject the economy. The second reason that Exter explains is that demand deposits subject to transfer by cheque have, in most countries of the world, become a more important form of money than actual currency, and variations in the volume of demand deposits resulting from changes in the cash positions or the credit policies of commercial banks frequently have more profound economic effects than variations in the supply of actual currency.

These arguments are still valid for Sri Lanka, and a Currency Board arrangement is not appealing for a small open economy like Sri Lanka's, where the relative share of domestic demand in aggregate demand is very high, as this system shall only be credible if the Central Bank holds sufficient foreign exchange reserves to cover the country's gross monetary liabilities consistently. At this stage of development, such a return to a Currency Board will result in an agonizing macroeconomic adjustment and a sharp reduction in social welfare, thus rendering this arrangement a non-option.

Although there was renewed interest in establishing Currency Boards after the collapse of the Soviet Union, the Argentinian currency crisis, and the Asian financial crisis, these efforts were mainly aimed at taming inflation by introducing a non-discretionary policy regime. It is for the same purpose that some countries sometimes adopt another country's currency, known as dollarization. From the time of the establishment of the Central Bank of Sri Lanka in 1950 until the adoption of open economy policies in 1977, Sri Lanka has followed a fixed exchange rate regime. Capital controls were non-existent in the initial years when there were no concerns related to the balance of payments, but controls were introduced soon in the 1950s. The international monetary system under the Bretton Woods agreement, essentially a pegged exchange rate system, was followed by Sri Lanka until its collapse in the early 1970s (Weerasinghe,2017).

Under the fixed exchange rate regimes, the Central Bank had no control over domestic inflation, as domestic inflation was directly linked to foreign inflation, and therefore, there was no need for it to be managed by an explicit monetary anchor. However, the fixed exchange rate system worked well only as long as Sri Lanka earned sufficient foreign exchange to meet expenditure on imports. For example, during the periods of export booms, particularly in the early 1950s, the fixed exchange rate regime worked well, as foreign exchange earnings, which arose due to external factors rather than domestic export promoting policies, were not only sufficient to meet current expenditure but also helped build up foreign reserves so that currency peg could be maintained without foreign grants or borrowings. In general, during most periods, the Central Bank had to support the exchange rate peg by restricting the use of available foreign reserves and imposing severe import restrictions. The Central Bank also failed to satisfy its multiple stabilization and development objectives that prevailed at the time (Weerasinghe, 2017).

During Sri Lanka's fixed exchange rate regime, successive governments did not continuously pursue export-oriented policies. There were when policies focused on export promotion, but there were more times of policy reversals towards encouraging import substitution and inward-looking policies. From a long-term perspective, such policies were inconsistent with the need to maintain a fixed exchange rate regime. Under these circumstances, the key challenge the Central Bank had to face was how to defend the exchange rate peg amidst policies that did not promote exports.

The solution of the Central Bank was to restrict the use of available foreign reserves and impose severe exchange control restrictions. In addition to pursuing inward-looking economic policies, successive governments ran high budget deficits mainly to provide subsidies and various free entitlements. Such budget deficits, even at moderate levels, caused more demand for imports amid weak export performance, creating continuous current account deficits, while the Central Bank was required to maintain a fixed exchange rate regime. Also, during that time, the Central Bank, from time to time, either devalued the rupee or maintained a dual exchange rate along with severe restrictions on the use of foreign exchange. This monetary policy framework locked credibility and created severe distortions to market pricing.

The 1973 oil crisis caused inflation escalations in all countries, including Sri Lanka, often resulting in a destructive wage–price spiral. In Sri Lanka, inflation increased to 14.4 percent by 1973, the highest level of inflation the country experienced until then during its post–independent history.

2.2 Market-Oriented Monetary Policy Framework

A market-oriented reform is a policy measure that allows and induces the competitive participation of private agents in a sector, activity, or market. Thus, the key concepts underlying market-oriented reforms are private participation and competition among private agents (Loayza & Soto, 2003). In November 1977, Sri Lanka embarked on a major economic liberalization move, marking a paradigm shift from inward-looking restrictive policies towards a liberal regime under which trade and payments were largely liberalized. To be consistent with the new liberal regime, the Central Bank abandoned the fixed exchange rate regime and moved to a more market-based system of exchange rate management (Weerasinghe, 2017). The dual exchange rate system was abolished by introducing a unified exchange rate, while the rupee was initially depreciated by 46 percent. With the unification, the exchange rate was allowed to float, providing scope for the exchange rate to be determined largely based on demand and supply conditions in the market (Gunaratna, 2011).

The Bank has also actively engaged in financial market development, that is the development of financial institutions, financial instruments, and payment and settlement systems. Nevertheless, the statutory reserve ratio (SRR) applicable to deposit liabilities of commercial banks, which is administratively determined, continued to be a key monetary policy instrument used by the Central Bank to control inflationary pressures in the economy during the 1980s and early 1990s. The development of the domestic financial sector enabled the Central Bank to adopt open market operations as a key monetary policy tool from the late 1990s (Wimalasuriya,2011). As the Sri Lankan economy had adopted a range of economic and financial sector reforms since the 1980s, with acceleration in the 1990s, the transmission of monetary policy and its effectiveness may have improved considerably (Perera, 2012)

This sharp devaluation addressed the overvaluation of the rupee observed under the fixed regime. The subsequent managed exchange rate regime allowed some flexibility to determine the value of currency largely based on market demand and supply while attempting to prevent the overvaluation of the rupee by maintaining the real value of the rupee against movements of a basket of major currencies.

2.3 Implementation of the managed floating system

The managed floating exchange rate system introduced in 1977 made the monetary system more complex. Introducing the managed floating exchange rate was a welcome move from the perspective of a liberal macroeconomist. This resulted in new challenges to the conduct of monetary policy, particularly as the exchange rate was no longer available to anchor inflation expectations like in the past. The Central Bank also faced a new challenge, as the government started to run extremely large fiscal deficits funded mainly by concessional external funding to develop public

infrastructure. Year-on-year inflation averaged 15.6 percent during February 1978 and January 1985, with a peak of 32.5 percent in August 1980 (Weerasinghe, 2019). It must be mentioned here that rising inflation was the main cause of the 1980 general strike, which resulted in over 40,000 public and private sector workers losing their jobs. In that situation, the Central Bank of Sri Lanka started looking for a new framework to contain inflation and inflation expectations without the pegged exchange rate system.

2.4 Monetary Aggregate Targeting in Sri Lanka

The first mention of desired monetary targets in a Central Bank annual report in Sri Lanka could be found in 1982. The 1982 annual report states that the National Credit Plan for 1982 was formulated against the perspective of the prevailing monetary and credit policies. It attempted to rationalize the use of private sector credit among different sectors of the economy as an instrument of selective credit policy (Wimalasuriya,2011).In that period, having considered the real growth, the estimated rate of price increase, and the increased monetization of the economy, the desired monetary targets were set in the Plan to maintain the consistency between financial and real output flows. The monetary targets were then translated into a permissible level of credit to the private sector by commercial banks after allowing for the impact of the external sector's behavior and the government's credit requirements.

Even after introducing monetary aggregate targeting in the early 1980s, the exchange rate remained a nominal anchor. With expanding twin deficits, it was increasingly becoming difficult to manage the exchange rate, and the Central Bank experimented with numerous permutations of managed floating exchange rate regimes, including "soft peg" arrangements. These efforts, which often resulted in a loss in international reserves of the Central Bank, culminated with Sri Lanka announcing a floating exchange rate regime in January 2001 and the subsequent amendment to the Monetary Law Act to streamline the objectives of the Central Bank.

2.5 Recent developments in the monetary policy framework

Monetary policy conducted under the monetary targeting frameworks assumes that there is a strong and reliable relationship between the goal variable and the nominal anchor. If the relationship is weak, monetary aggregate targeting will not work and may not deliver the expected results of monetary policy. This seems to have been a serious problem in many countries all over the world and given the breakdown of the relationship between monetary aggregates and goal variables such as inflation, as well as the changes in money demand function, many countries have adopted inflation targeting as their monetary policy framework. Inflation targeting is characterized by (1) an announced numerical inflation target, (2) an inflation forecast, which facilitates forward-looking monetary policy decision-making, and (3) a high degree of transparency and Accountability. The inflation targeting framework is generally associated with an institutional framework by the trinity of a mandate for price stability, independence, and accountability for the central bank, enabling more effective anchoring of inflation expectations. A country needs to fulfill several prerequisites prior to or parallel to adopting an inflation-targeting framework and the

efficacy of the policy transmission mechanism. Since adopting inflation targeting by New Zealand in 1989, many countries have been shown in Table 01(CBSL,2015).

Table 01: Inflation Targeting Countries

Year Adopted Inflation Targeting	Countries
1989-1994	New Zealand, Canada, United Kingdom, Sweden, Australia
1995- 1999	Czech Republic, Israel, Poland, South Korea, Brazil, Chile, Colombia
2000- 2004	South Africa, Thailand, Mexico, Iceland, Norway, Hungary, Peru, Philippines

Source: Central Bank of Sri Lanka

In practice, inflation targeting is flexible rather than strict, and most of the central banks do not only aim at stabilizing inflation around an inflation target but also put efforts into stabilizing other macroeconomic variables in the economy. Most central banks conduct flexible inflation targets (FIT) rather than strict inflation targets (SIT). FIT means that monetary policy aims at stabilizing both inflation around the inflation target and the real economy, whereas strict inflation target (SIT) aims at the stability of the real economy. e.g., the Reserve Bank of India and the Ministry of Finance in India have agreed to implement a monetary policy to focus on a flexible inflation target framework (CBSL,2015).

In the global economy, such a monetary policy framework that emphasized the role of expectations and credibility existed. Inflation targeting was quickly chosen as the monetary policy framework in Canada, the United Kingdom, Australia, and Sweden. Encouraged by the success of inflation targeting, several other advanced and emerging market economies adopted this framework. These countries used inflation targeting either to bring down inflation to stubbornly high levels or to maintain inflation at low and stable levels on a sustained basis. Considering the success of flexible inflation targeting in advanced and emerging markets, the Central Bank of Sri Lanka also considered this the best framework to adopt in the medium term (Weerasinghe,2017).

In the modern world, only a few countries practice exchange rate targeting as the monetary policy framework, as it requires a sizable international reserve to support the regime's credibility. Exchange rate targeting is the process through which a Central Bank intervenes in the market to maintain the exchange rate at a desired level or a predetermined target. Singapore presents itself as a success story, with the exchange rate being used as its key monetary policy instrument in its monetary policy conduct. An economy heavily reliant on external trade and finance, with imports and exports far exceeding the country's GDP, the exchange rate has historically played a pivotal role in determining inflation in Singapore. Moreover, as Singapore operates a managed floating exchange rate regime, it has greater control over the exchange rate, particularly in the form of direct interventions in the domestic foreign exchange market. The exchange rate can fluctuate within a policy band, allowing it to cushion against short-term volatilities arising from imperfections in the real economy

(CBSL,2019). Under this exchange rate-based monetary policy framework, Singapore can ensure exchange rate stability while allowing greater capital mobility but has no control over domestic interest rates and money supply. While alleviating the impact of short-term macroeconomic pressures, the exchange rate-based monetary policy framework has also ensured that the exchange rate remains aligned with Singapore's macroeconomic fundamentals (CBSL,2019).

Furthermore, greater fiscal discipline, flexible factor markets, a robust financial system, as innovation have supported and led to the success of Singapore's exchange rate-based monetary policy framework. However, such an exchange rate-based monetary policy framework may not be suited for a country like Sri Lanka as the country is experiencing persistent current account deficits and fiscal deficits with relatively large debt service payment requirements. Also, channeling efforts to maintain the exchange rate at a particular level would be at the expense of the country's limited foreign exchange reserves. Moreover, the success of such a framework would require strong macroeconomic fundamentals such as fiscal surpluses, robust products, factors, and financial markets, as well as greater policy stability and consistency.

As we are concerned in Sri Lanka, the Central Bank of Sri Lanka prompted the modernization project, resulting in legislative, procedural, and operational changes in relation to central banking in Sri Lanka. Regarding legislative changes, the amendments to the Monetary Law Act (MLA) in 2002 were the most important. Despite these modifications to the framework of conducting monetary policy over time, Sri Lanka continued to suffer from double-digit inflation until 2009 as a combined outcome of high budget deficits and loose fiscal policy, reactive rather than proactive monetary policy, frequent domestic supply disruptions, and international commodity price shocks. In June 2008, inflation increased to 28.2 percent, the highest level of inflation since 1980. To manage this situation within the monetary targeting framework, the central bank used strict quantitative monetary targets with increased policy interest rates.

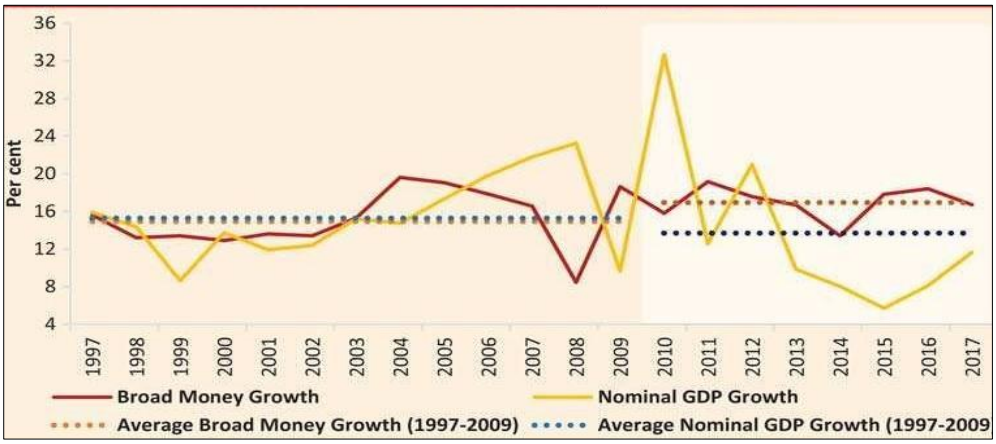
Although inflation spiked during some periods under the monetary targeting framework with managed floating or free-floating exchange rates, following strict monetary targets sometimes enabled the Central Bank to bring inflation back to tolerable levels. For instance, implementing strict quarterly reserve money targets when inflation peaked at over 28% in 2008 enabled rapid disinflation during a short period. At the same time, the requirements for the successful implementation of monetary aggregate targeting, namely a close relationship between nominal GDP growth and broad money growth and a close relationship between money growth and inflation, were visible until around 2009.

However, the gap between nominal GDP growth and broad money growth has widened notably since 2009. Even at high money and credit growth times, inflation has remained single digit. The ability of the Central Bank to contain inflation in single digits for a continued period of over 120 months, despite relatively high average money and credit growth, can be partly attributed to technological innovations that have changed the behavior of the public. However, it is likely that the efforts of the

Central Bank to anchor inflation expectations around mid-single digit levels through active communication and commitment to maintaining inflation at such levels have contributed significantly towards this achievement.

As the eventual breakdown of the relationship between monetary aggregates, inflation, and GDP growth [See Figure 02] was anticipated in line with developments in several other advanced and emerging market economies, by the late 1990s and the beginning of 2000s, the Central Bank had commenced an internal process to upgrade the monetary policy formulation and implementation process while strengthening research on alternative monetary policy frameworks.

In addition to moving to a floating exchange rate regime and streamlining the objectives of the Central Bank, the upgrades included the introduction of the Monetary Policy Committee (which is a technical committee that makes monetary policy recommendations to the Monetary Board), strengthening the independence of the Central Bank by expanding the membership of the Monetary Board, commencing active open market operations and a policy rate corridor approach, signaling the changes in the monetary policy stance based on policy interest rates, announcing the monetary policy stance through a regular press release based on an advance release calendar.



Source: Central Bank of Sri Lanka

Figure 02: Nominal GDP Growth vs Broad Money Growth in Sri Lanka

In addition, enunciating broad policies of the Central Bank for the medium term through an annual Road Map announcement, establishing a Monetary Policy Consultative Committee to obtain views of the private sector and academia, commencing an inflation expectations survey, encouraging the Department of Census and Statistics to update the inflation index and publish core inflation and continued strengthening of modeling and forecasting capabilities of the technical staff of the Central Bank is action taken by Central bank of Sri Lanka. With these developments, the Central Bank has gradually moved to a de facto inflation-targeting monetary policy regime. The Central Bank has announced that its target for monetary policy is to maintain inflation around 4-6%, which is considered a suitable inflation range for

an emerging market economy to support sustained economic activity (CBSL, Road Map,2019).

The Central Bank projects key macroeconomic variables such as inflation and GDP growth in relation to its potential and uses the monetary policy instruments, mainly policy interest rates, to address sustained deviations of inflation from the target range. The interest rate in the short-term interbank money market acts as a key operating target for monetary policy, and open market operations are used to steer this short-term interest rate along a desired path. The exchange rate is allowed to float freely without maintaining a peg or a target exchange rate, and the Central Bank intervenes in the domestic foreign exchange market to curb excessive volatility, typically arising from domestic and global speculative activity, and to build up its international reserve.

The Central Bank continues to monitor several other macroeconomic indicators, including movements in reserve money, broad money, credit disbursements, market lending, and deposit rates, benchmark yield curve, the balance of payments developments, nominal and real exchange rates, fiscal developments, leading indicators for real sector developments, headline inflation, core inflation, food, and non-food inflation, administered price adjustments, etc., to help guide monetary policy decision making within this data-driven forward-looking approach to monetary policy.

The Central Bank of Sri Lanka has introduced a series of operational changes in the recent past with a view to improving the framework for monetary policy implementation. One such change was the extension of the periods of reserve maintenance by licensed commercial banks in June 2013. Other measures were streamlining the policy rate corridor of the CBSL and renaming it as the standing rate corridor in January 2014. The first Change was an extension of the reserve maintenance period (RMP). In Sri Lanka, all commercial banks must reserve a specific percentage of the Statutory Reserve Ratio (SRR) of their deposit liabilities as a cash deposit with the central bank.

The second change was the establishment of the standing rate corridor (SRC). The Policy interest rate corridor of the CBSL, an important feature of the Open Market Operations (OMO), was restructured in January 2014 and renamed to streamline monetary operations. Policy rates are periodically reviewed and adjusted appropriately, if necessary, to guide the interest rate structure of the economy to achieve the desired path of inflation. This is an ongoing process, and it is expected that these improvements will strengthen monetary policy transmission, enabling the central bank to ensure economic and price stability while supporting financial system stability (CBSL,2013)

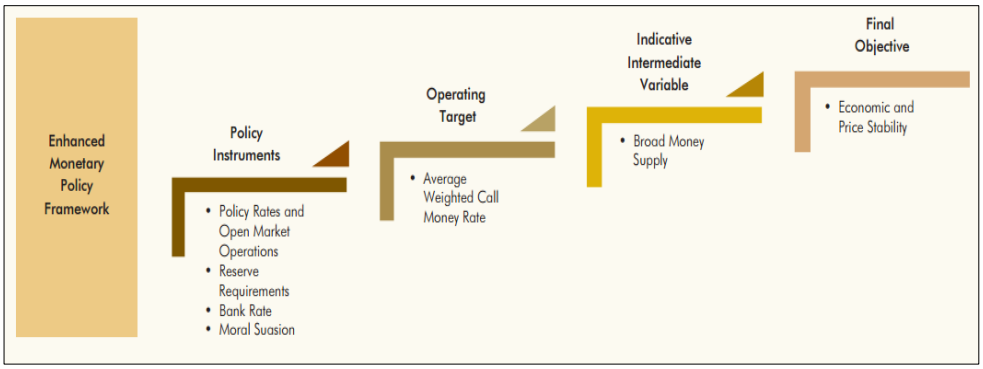
2.6 Flexible inflation targeting framework

In 2017, “Road Map; Monetary and Financial Sector Policies for 2017 and beyond”, the Central Bank announced its intention to officially adopt flexible inflation targeting as its monetary policy framework in the medium term. Flexible inflation

targeting means that monetary policy aims at stabilizing both inflations around the inflation target and the real economy, whereas strict inflation targeting aims at stabilizing inflation only, with little regard for the stability of the real economy (Svensson, 2000).

The Central Bank is given independence to conduct monetary policy with the aim of achieving the envisaged inflation targets while it is also held accountable for its actions. This rule-based framework enhances the credibility of monetary policy, thus allowing additional welfare gains for the entire economy. This is because the financial market and the general public are assured of inflation being maintained at the targeted level on average, thus requiring only little adjustment in policy interest rates by the Central Bank to bring inflation back to target levels.

As an interim arrangement, the Central Bank conducts its monetary policy in an enhanced framework with both monetary aggregate targeting and flexible inflation targeting framework features. Under this enhanced monetary aggregate targeting, the central bank focuses on establishing inflation in the mid-single digit over the medium term while supporting growth objectives and flexibility in exchange rate management. In addition, instead of reserve money, the central bank currently uses the average weighted call money rate (AWCMR) as its operating target and increasingly relies on its market policy instruments (CBSL,2015).



Source: Central Bank of Sri Lanka

Figure 03: Modification of Monetary Policy Framework in Sri Lanka

The macroeconomic projection capabilities of the Central Bank are currently being strengthened. The Central Bank of Sri Lanka has developed the medium-term dynamic stochastic general equilibrium (DSGE) and forecasting policy analysis system (FPAS) for building technical infrastructure for the successful implementation of flexible inflation targeting (CBSL,2019). This system is currently being integrated into the monetary policy formulation process of the central bank. Going forward, the monetary policy framework is in line with the dynamic global environment to ensure both price and real sector stability on a sustainable basis.

The accommodative monetary policy adopted by almost all central banks across the globe continued amidst weak economic activity. Growing uncertainty, triggered by the second wave of Covid 19 has led the Central Bank to expand unconventional

policy measures further. The Central Bank relaxed its monetary policy stance to unprecedented levels in 2020 to revive the economy affected by the pandemic. In response, both market deposit market rates have declined to single digital levels, while some have reached their historic lows (CBSL,2021).

Musthafa, Le & Suardi (2023) examined the paper empirically investigates effects of monetary policy shocks on Sri Lankan economy with particular focus on the strength of credit and exchange rate channels using a VAR model for 2003–2019 period. The focus is placed on the effect of monetary policy shocks on the real economy and the role of credit and exchange rate channels in monetary policy transmission. Results show that an unexpected monetary policy shock decreases output, money supply and commercial bank lending to the private sector and monetary policy shocks have more significant and persistent impacts on domestic variables.

This is a policy decision taken after careful analysis, and it is expected that flexible inflation targeting will enable the country to institutionalize its achievement of a decade of single-digit inflation within a transparent and accountable framework. It is worth noting that in Sri Lanka, time and again in the past, inflation has often been highlighted as "public enemy number one" (Gunarathne,2011, p. 51). It is to tame this public enemy of inflation on a sustainable basis that the Central Bank is continuing to work on, thus removing one key barrier that could hinder the country's progress.

3. METHODOLOGY

The researcher conducted a literature review on the monetary policy framework in Sri Lanka and its impact on the financial sector. The review is done following a thematic approach. In this context, a comprehensive search of the literature in English published between 1949 and 2023 was conducted. Although many studies were found, the reliability of such quality and content is low and 25 studies were identified after completing the screening process. First, studies that addressed monetary policy framework were selected, followed by studies that addressed its impact for financial sector. The facts reported here are based on research and reports identified through searching academic journals and abstracting databases, internet searches, and the websites of key organizations. The researcher used the selection criteria to search for articles. Here, quantitative, qualitative, and mixed methods study reports were used. In searching for research papers, no restrictions were placed on the country where the research was conducted. But researchers focused more on research on monetary policy framework in Sri Lanka.

4. RESULTS AND DISCUSSION

From establishing the Central Bank of Sri Lanka in 1950 to adopting open economy policies in 1977, Sri Lanka has followed a fixed exchange rate regime. Under the fixed exchange rate regimes, the Central Bank had no control over domestic inflation. The fixed exchange rate system worked well only as long as Sri Lanka earned sufficient foreign exchange to meet expenditure on imports. During Sri Lanka's fixed exchange rate regime, successive governments did not continuously pursue export-

oriented policies. However, there were more times of policy reversals towards encouraging import substitution and inward-looking policies. The Central Bank, from time to time, either devalued the rupee or maintained a dual exchange rate along with severe restrictions on the use of foreign exchange. This monetary policy framework locked credibility and created severe distortions to market pricing.

In Sri Lanka, inflation increased to 14.4 percent by 1973, the highest level of inflation the country experienced until then during its post–independent history. Introducing the managed floating exchange rate was a welcome move from the perspective of a liberal macroeconomist. In November 1977, Sri Lanka embarked on a significant economic liberalization move. The Central Bank abandoned the fixed exchange rate regime and moved to a more market-based system of exchange rate management. The statutory reserve ratio (SRR) applicable to deposit liabilities of commercial banks and open market operations continued to be a key monetary policy instrument used by the Central Bank to control inflationary pressures in the economy during the 1980s and early 1990s.

As the Sri Lankan economy had adopted a range of economic and financial sector reforms since the 1980s with acceleration in the 1990s, the transmission of monetary policy and its effectiveness may have improved considerably. A fundamental change with respect to the conduct of monetary policy during the 1980s was that the Central Bank adopted the monetary targeting framework for monetary policy. If the relationship between the goal variable and the nominal sector is weak, monetary aggregate targeting will not work and may not deliver the expected results of monetary policy. Hence, many countries have adopted inflation targeting as their monetary policy framework. Most of the central banks not only aim at stabilizing inflation around an inflation target but also put efforts into stabilizing other macroeconomic variables in the economy. In the modern world, only a few countries practice exchange rate targeting as the monetary policy framework, as it requires a sizable international reserve to support the regime's credibility. The Central Bank continues to monitor several other macroeconomic indicators, including movements in reserve money, broad money, credit disbursements, market lending, and deposit rates, benchmark yield curve, the balance of payments developments, nominal and real exchange rates, fiscal developments, leading indicators for real sector developments, headline inflation,

The Central Bank of Sri Lanka prompted the modernization project, resulting in legislative, procedural, and operational changes in relation to central banking in Sri Lanka. With regard to legislative changes, the amendments to the Monetary Law Act (MLA) in 2002 were the most important. However, it is likely that the efforts of the Central Bank to anchor inflation expectations around mid-single digit levels through active communication and commitment to maintaining inflation at such levels have contributed significantly towards this achievement. The Central Bank of Sri Lanka has introduced a series of operational changes in the recent past with a view to improving the framework for monetary policy implementation. The Central Bank conducts its monetary policy in an enhanced framework with both monetary aggregate targeting and flexible inflation targeting framework features.

5. CONCLUSION AND POLICY IMPLICATIONS

The objective of this paper was to review existing literature on the historical evolution of monetary policy regimes in Sri Lanka. Before establishing the Central Bank of Sri Lanka, there was a currency board system in Sri Lanka. Gradually, it transmitted to a fixed exchange rate system, but the Central Bank implemented a Managed floating system due to some weaknesses. Therefore, the paper addresses the different aspects of monetary policies and reasons for adopting various monetary and exchange rate policy regimes from time to time.

When reviewing the monetary system in Sri Lanka, it is observed that as the role of the Currency Board must remain purely passive, it cannot influence the money supply in any way. The literature emphasizes that Sri Lanka needs to establish an independent monetary system and an institution with powers to control the financial sector. Therefore, a currency board system was not appealing for a small, open economy like Sri Lanka. As a result of this situation, Sri Lanka has followed a fixed exchange rate policy after 1977. However, evidence and examples showed that the central bank had no control over domestic inflation under that system. However, the fixed exchange rate system worked well only as long as Sri Lanka earned sufficient foreign exchange to meet expenditure on imports.

As the Sri Lankan economy had adopted a range of economic and financial sector reforms since the 1980s, with acceleration in the 1990s, the transmission of monetary policy and its effectiveness had improved considerably. Inflation targeting is flexible rather than strict, and most central banks aim not only to stabilize inflation around an inflation target but also put efforts into establishing other macroeconomic variables in the economy. In the global economy, such a monetary policy framework that emphasizes the role of expectations and credibility exists. According to the inflation target monetary policy framework, the Central Bank of Sri Lanka maintains its monetary policy within an enhanced framework with both monetary aggregate targeting and flexible inflation targeting framework features. The current conditions and the expected solutions to longstanding macroeconomic issues have prompted the Central Bank of Sri Lanka to adopt flexible inflation targeting by 2023.

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Department of Banking & Finance
Wayamba University of Sri Lanka

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THE DYNAMIC RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT INFLOWS AND INTEREST RATE IN SRI LANKA

M N F Washima

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Abstract

Foreign direct investment acts as an engine of rapid growth and development of developing and emerging countries. It helps to promote the host nation's economic growth, financial inflows and markets, technology, and skills. This study aims to identify the dynamic influence and relationship between Foreign Direct Investment (FDI) and interest rate in Sri Lanka over the period 1978 to 2020. Foreign direct investment inflow has been used as the dependent variable while gross domestic products, interest rate, inflation rate, trade openness and exchange rate are the independent variables. This study used the ARDL model for the analysis. According to the bound test, F statistics is greater than the upper bound value. Therefore, this study confirmed that there is a cointegration relationship between foreign direct investment inflows and other explanatory variables. A negative and significant error correction coefficient of FDI inflows reveals that 128% disequilibrium is corrected each year which implies that FDI moves downward towards long-run equilibrium. This study found that there is no substantial relationship between the interest rate and FDI inflows in the long run and a negative and substantial relationship in the short run. Therefore, this study suggests that the government of Sri Lanka has to reflect on developing a monetary policy and maintaining the balance of interest rate and exchange rate. Because of the currency depreciation, the exchange rate negatively influences FDI.

Keywords: Exchange Rate, Foreign Direct Investment, GDP Growth, Interest Rate

M N F Washima
(Corresponding Author)
Department of Economics and Statistics, South Eastern University of Sri Lanka
Email: fwaseema@seu.ac.lk
https://orcid.org/0000-0001-8674-0365

1. INTRODUCTION

According to the World Investment Report, Foreign direct investments (FDIs) are defined as investments made by an investor, a company and a government into another nation (Hayes, 2022). For a country, foreign investments come in numerous systems such as foreign loans, portfolio investment, and foreign direct investment. Therefore, FDI acts as an engine of rapid growth and development of developing and emerging countries. It helps to promote the host nation's economic growth, markets, financial inflows, technology, and skills. As well, it can eliminate the deficiencies of financial resources and knowledge and supports human skill progress which leads to economic growth (Faroh & Shen, 2015).

Interest rate refers to the percentage charged by the creditor for the usage of its money (Kimberly Amadeo, 2019). An interest rate is a key tool in the monetary policy of a nation and it is the most related variable to inflation and investment. As well as the interest rate is determined in the money market by the demand for money and money supply. Keynes emphasized that a rise in income has a positive impact on interest rates due to a rise in money demand. But, given the demand for money, a rise in the money supply causes a decrease in the interest rate and vice versa (Dwivedi, 2005).

Moreover, the interest rate is one of the key determinant factors of FDI. Generally, lower interest rates induce investors to invest more in economies. Because lower interest rates minimize the cost of production and maximize the higher returns. Consequently, good investment revenues, security through lower interest rates and an improved business atmosphere create an opportunity for high investment in an economy.

Nowadays, FDI is seen as the main key to the global economy and an essential source of socio-economic development. Still, advanced industrialized countries attract 59 percent of FDI inflows like the US and UK, while developing countries attract only 14 percent share of FDI, even though it supports sustainable growth in developing countries. FDI inflows to ASIAN countries improved from $123 billion in 2016 to $137 billion in 2017. Inflows from Indonesia increased from $3.9 billion to $23.1 billion in 2016, to Thailand to $9.1 billion and to the Philippines grew by 21 percent (Asean, 2021).

In recent years, FDI arrivals to Sri Lanka have risen gradually. Inflows to Sri Lanka reached USD 1.6 billion in 2018 by the ASEAN countries including India, China, and Singapore. According to the World Bank's Doing Business Index Report, Sri Lanka was ranked 100th out of 190 countries. The country has aimed to achieve the 70th rank by 2020. FDI stock exceeds USD 12.7% billion in 2018. As well, China, Hong Kong, India, and Singapore have invested a large amount in 2018. Hence, the government assumes to increase FDI to more than USD 4 billion by 2022.

Even Though, nowadays Sri Lanka faces some struggles in attracting FDI inflows. Now, there is peace and security. However, these are not sufficient conditions to attract the FDI inflows to Sri Lanka. But, confirming an attractive investment, good governance, macroeconomic policies, rule of law, economic stability, the guarantee

of property rights, and absence of corruption are preconditions to attract FDI (Sanderatne, 2011). As well as the real interest rate also determines the investment level. Because, changes in interest rates directly affect investment, output, and employment. Consequently, real GDP decreases and creates inflation through price changes.

Unsustainable external debt has increased. This is because of the absence of enough exports and FDI. Attracting more FDI requires several ingredients such as political stability, a reasonable tax regime, ensuring property rights, less corruption and interest rate. Further, most of the FDI inflows are coming from infrastructure development projects. Hence, Sri Lanka must attract FDI inflows to the manufacturing and service sectors. Because that only improves the tradable sectors, helps to increase the exports and leads to creating job opportunities (Daily Mirror - Sl's Foreign Direct Investment Conundrum, 2019).

High interest rates discourage FDI inflows. Because a high interest rate rises the cost of investment. Therefore, investors need more funds over their funds to invest in new projects. Therefore, lending interest rates of a country are very complex and cost for external investors. Hence, high lending interest rates may raise the cost of principal investment in all projects. Finally, it discourages FDI inflows (Jayasekara, 2014). According to the CEIC report, the Sri Lanka Bank Lending Rate was at 16.380 % in April 2022. This lending rate increased from 9.710 % in Mar 2022.

Even, though there is some empirical literature which has been published on determinant factors of FDI in many developing countries, there is only considerable literature related to the interest rate and FDI in Sri Lanka (Albert & Stuart, 2008; Amarasinghe, 2019; Jayasekara, 2014; Muraleetharan et al., 2018; Thilakaweera, 2012). In this context, it is well-intentioned to explore the relationship between FDI inflows and interest rates in Sri Lanka. Because this study can help to identify potential risks and vulnerabilities in the economy due to the fluctuations in interest rates which may affect the attractiveness for foreign investors. Sometimes, unstable interest rates may prevent foreign investors and affect the stability of the financial system. Hence, to fill this research gap, this study discovers the relationship between FDI inflows and interest rates in Sri Lanka by using ARDL-Bounds testing approach.

Further, the COVID-19 pandemic employed a substantial downward burden on international trade and the international economy. It leads to a decline in trade, FDI flows, and tourism. The Sri Lankan economy is affected by the fluctuation of external sector performance. FDI flows indicate a downward trend in 2020 by 42% 2020 compared to 2019. It affects capital flows such as migration, tourism, and remittance flows.

Therefore, this study intends to investigate the association and influence of interest rates on FDI inflows in Sri Lanka and to make some policy suggestions to improve the FDI inflows.

2. LITERATURE REVIEW

Thilakaweera (2012) identified the long-run connection and causality between FDI, real per capita GDP, and the level of infrastructure in Sri Lanka. These empirical results confirmed the unidirectional causality between the level of infrastructure and FDI. (Jayasekara, 2014) discovered that GDP growth rate, inflation, infrastructure quality, exchange rate, lending interest rate, corporate income tax, and labour force were significant factors of FDI in Sri Lanka from 1975 to 2012. Further, they are related to the cost of production for investors.

Amarasinghe (2019) investigated the determinants of FDI inflows in Sri Lanka for the period from 1977 to 2016. In this study, two regression models were established. The first model suggested that the growth rate of GDP, inflation, exchange rate and military expenses have a significant impact on FDI inflows and trade openness has an impact on FDI inflows in the second model. This study concluded that a considerable increase in FDI inflows has not taken place since the victory of the war in 2009.

This study found the positive and significant impact of real gross domestic product, interest rate, exchange rate and infrastructure quality on FDI. Inflation rate and international trade volume do not have a significant impact. Moreover, FDI and trade are measured as vital elements to enhance the FDI inflows (Muraleetharan et al., 2018). The findings of this study indicated that the wage rate is the most significant determinant of FDI in Sri Lanka. However, GDP, exchange rates, interest rates, and the level of external trade should be more considered in making policies to attract FDI inflows (Albert & Stuart, 2008).

Bett (2017) identified the connection between foreign direct investment and GDP, interest rate, exchange rate and inflation in Kenya by employing the multiple linear regression model. This study found that economic growth, inflation rate, interest rate, and exchange rate had a strong correlation with FDI. Thus, the model implied the effects of interest rates on FDI inflows. However, this result exposed that interest rate, economic growth, exchange rate and inflation rate are not determined by FDI inflows at a significant level in Kenya.

The influence of interest rates on FDI was investigated by using the Ordinary Least Square method in Sierra Leone for the years 1990-2016. The results indicated that interest rates significantly influence FDI inflows and revealed that GDP growth and trade openness are the major determinants of FDI (Fornah & Yuehua, 2017).

The connection between the FDI inflows and interest rate is examined using the Vector Auto Regression technique over the period 1986 to 2012. This study proposes that the interest rates of Thailand, Indonesia, and Malaysia have a negative correlation to FDI (Siddiqui & Aumeboonsuke, 2014). Quazi & Mahmud (2014), identified that economic openness, economic freedom, economic prosperity, incremental-legged changes, and human capital in FDI raise FDI inflows significantly in South Asia whereas political uncertainty significantly declines from 1995 to 2000.

Exchange rates and trade openness are the vital causes of FDI inflows that have been positively significant in the Sierra Leone economy found by using econometrics techniques from 1985 to 2012. Further, this study found that inflation, GDP and interest rate are insignificant variables causing the variability of FDI flows. Hence, based on the acceptance of the null hypothesis of this study, this study concluded that interest rate does not affect FDI inflows in Sierra Leone (Faroh & Shen, 2015).

Anna & Karambakuwa (2012) verified that a high interest rate positively affects the FDI inflows in Zimbabwe by using the OLS approach. This paper identified that interest rate is not significantly impacted on FDI inflows. And, this study discovered that the GDP, exchange rate, and inflation are also determinants of FDI inflows and revealed that political uncertainty, war, and observed domestic rights failures are the major determinants of FDI in Zimbabwe. These studies indicated the determinants of FDI. However, very few literatures only found the interest rate as the determinant of FDI even in Sri Lanka. Therefore, this study analyses the relationship between interest rate and FDI inflows.

3. METHODOLOGY AND DATA ANALYSIS

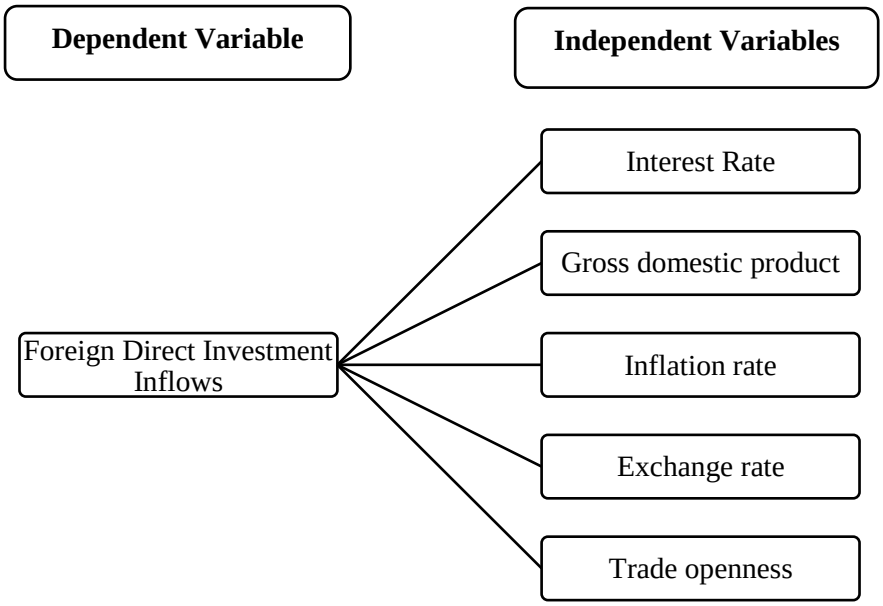
3.1 Data Collection

This study is enlightened through the secondary data which are gathered from secondary sources. In this study, the annual time series data are used for the period from 1980 to 2017. The exchange rate, GDP growth rate, and foreign direct investment data were directly gained from the annual report of the Central Bank of Sri Lanka. The data on interest rates were collected from the International Monetary Fund e-library and a popular statistics database website called Knoema. The inflation rate data was attained from the International Financial Statistics and International Monetary Fund e-library.

Table 01: Variable Operationalization

Variable	Description	Measurement
FDI	Foreign direct investment inflows	Net FDI inflows as a percentage of GDP
GDP	Gross domestic product	GDP growth rate (annual % change)
INF	Inflation rate	Consumer price index (annual % change)
IR	Interest rate	Lending Interest rate
EXR	Exchange rate	Local Currency Unit per US $, (period average)
TOP	Trade openness	Exports plus imports as percentage of GDP

3.2 Conceptual Framework



3.3 Econometric Models

To obtain reliable regression results, it is required to examine the stationarity or non-stationary of the time series variables to avoid spurious regression in the model. Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests were employed to find whether the data were stationary or not. Once time-series variables are non-stationary and used to analyze the findings, it may produce spurious results. ADF and PP tests were performed on variables to distinguish if these variables were stationary or non-stationary at the level. The first difference is used When variables are non-stationary at the level.

Auto-Regressive Distributed Lags (ARDL) Bounds test was employed to invent cointegration among variables in this study. The ARDL bounds testing method for cointegration was projected by Pesaran et al. (2001). The long-run association is examined using the values of bounds test. ARDL test is performed when all variables are not in the same order of integration. That means variables are combined in mixed order [*I (0), I (1)*] or a combination of both orders. The ARDL method allows the variables to have different levels of optimal lags.

Therefore, the ARDL model was performed to investigate long-run relations and short-run dynamics between foreign direct investment, interest rate, exchange rate, trade openness, and gross domestic product in Sri Lanka. Further, CUSUM and CUSUM OF SQUARES tests were employed to find the stability.

3.4 Model Specification

This study analytically observes the association between foreign direct investment and interest rates in Sri Lanka from 1978 to 2020. Where, FDI is the dependent variable and gross domestic product, inflation, interest rate, exchange rate and trade openness are independent variables. Hence, the econometric model is specified as:

$$FDI_t = \beta_0 + \beta_1 GDP_t + \beta_2 INF_t + \beta_3 IR_t + \beta_4 EXR_t + \beta_4 TOP_t + \varepsilon_t \ldots\ldots\ldots\ldots \textit{Equation (01)}$$

Where FDI represent the foreign direct investment, GDP shows the gross domestic product, INF denotes the inflation rate, IR represents the interest rate and EXR and TOP denote the exchange rate and trade openness. β_0 is an intercept coefficient, β_1 to β_4 are coefficient parameters to be appraised. Eviews version 10.0 was used to estimate the econometric models.

$$\Delta FDI_t = \alpha_0 + \sum_{i=1}^{n} \alpha_1 \Delta FDI_{t-i} + \sum_{i=1}^{n} \alpha_2 \Delta GDP_{t-i} + \sum_{i=1}^{n} \alpha_3 \Delta INF_{t-i} + \sum_{i=1}^{n} \alpha_4 \Delta IR_{t-i} + \sum_{i=1}^{n} \alpha_5 \Delta EXR_{t-i} + \sum_{i=1}^{n} \alpha_6 \Delta TOP_{t-i} + \delta_1 FDI_{t-i} + \delta_2 GDP_{t-i} + \delta_3 INF_{t-i} + \delta_4 IR_{t-i} + \delta_5 EXR_{t-i} + \delta_6 TOP_{t-i} + ECM_{t-i} + \varepsilon_{ti} \ldots\ldots\ldots\ldots \textit{Equation (02)}$$

Where: Δ indicates the first variance operator. α0 is constant. α1 to α6 show the short-run dynamic coefficients. $\delta 1$ to $\delta 6$ are the long-run multipliers. ECM is an error correction model. εt denotes white noise errors. 'n' is the optimal lag length which is designated by the model Schwarz information criterion (SIC) and Akaike Information Criterion (AIC).

The null hypothesis of no cointegration (H0:α1 =α2 =α3 =α4 = α5 =α6) is tested against the alternative hypothesis of co-integration (H1: $\delta\ 1 \neq \delta\ 2 \neq \delta\ 3 \neq \delta\ 4 \neq \delta\ 5 \neq \delta\ 6$). The bound test is used to fix the long-run association. The calculated F-statistic value is linked with critical bound values [lower bound I (0) and upper bounds I (1)]. If the calculated value of F statistics is better than the upper bound value, the null hypothesis of no cointegration will be rejected against the alternative hypotheses of cointegration. The null hypothesis of no cointegration will be accepted when the estimated value of the F – statistic is lesser than the lower bound. Where the values of the F – statistics are within upper and lower bound values then the null hypothesis may either reject or accept.

4. RESULT AND DISCUSSION

Table 02, results show that trade openness, exchange rate and interest rate lie non-stationary in their level in both ADF and PP tests. But, they become stationary in the first difference at 5 percent significance level. In the meantime, FDI, GDP and inflation are stationary at 5 percent significant level in both their level of ADF and PP tests and the first difference.

Thus, this study adopts that FDI, GDP and inflation are also non-stationary in their level and they become stationary in the first difference. Since the order of integration variables is I(0) and I(1), the cointegration Johansen method is not performed. Consequently, the ARDL bound test is performed to examine the short and long-run vitality of the dependent and independent variables.

Table 02: Stationary Test Result: Augmented Dickey-Fuller (ADF) Test and Phillips Perron (PP) Test

Variables	ADF Test (Trend)		PP Test (Trend)		Order of Integration
	Levels	First Difference	Levels	First Difference	
FDI	-4.600986 (0.0007)***		-4.582612 (0.0007)		I(0)
EXR	1.557990 (0.9992)	-6.261590 (0.0000)***	1.789825 (0.9996)	-6.260909 (0.0000)***	I(1)
IR	-2.179076 (0.2169)	-6.239919 (0.0000)***	-2.286780 (0.1814)	-7.130068 (0.0000)***	I(1)
GDP	-4.820639 (0.0003)***		-4.820639 (0.0003***		I(0)
INF	-4.612867 (0.0006)***		-5.635895 (0.0002)***		I(0)
TOP	-0.924574 (0.7697)	-5.618687 (0.0000)***	-1.012733 (0.7393)	-5.604481 (0.0000)***	I(1)

Note: *, **, *** indicate 10%, 5% and 1% significant levels respectively

Source: Computed in E-Views Software

Table 03 indicates the critical values of the bound test. Estimated F – statistic (4.954134) is more than the critical value at 1 percent, 5 percent and 10 percent for the upper bound I(1). Therefore, this study confirmed that there is cointegration. This suggests that there is a long-run association between GDP,FDI, interest rate, inflation, trade openness and exchange rate in Sri Lanka.

Table 03: Bound Test

Critical Value	Lower Bond Value – I(0)	Upper Bound Value – I(1)
1%	3.06	4.15
5%	2.39	3.38
10%	2.08	3
F-Statistics	4.954134	
K	5	

Source: Computed in E-Views Software

The coefficient of interest rate (-0.174389) has a negative and statistically significant impact on FDI inflows (in Table 04). In this study, there is a negative association between interest rates and FDI inflows. This finding indicates that a 1 percent rise in the interest rate primes to an almost 17 percent decrease in FDI inflows in Sri Lanka. The negative consequence of interest rate on FDI advocates the view of (Bett, 2017; Faroh & Shen, 2015; Jayasekara, 2014) that a decrease in interest rate typically increases the FDI. Hence, by decreasing the interest rate, the Sri Lankan government can increase the FDI inflow into the country. Unfortunately, exchange rate depreciation against the US dollar in Sri Lanka supports an increase in interest rates.

Consequently, FDI inflows are affected. But, in the long run, the interest rate has no significant connection between the interest rate and FDI inflows.

Table 04: Long Run Coefficients

Constant	GDP	INF	IR	EXR	TOP
-1.139028	0.089156	0.013213	0.020724	0.006402	0.016439
(0.1409)	(0.0581)*	(0.4890)	(0.6987)	(0.0279)**	(0.0925)*

Note: *, **, *** indicate 10%, 5% and 1% significant levels respectively

Source: Computed in E-Views Software

Similarly, the coefficient of economic growth (0.076043) has a positive and significant impact on Foreign Direct Investment inflows in both the short run and long run. This implies that a 1% percent increase in GDP can lead to an approximately 7 percent increase in FDI inflows to Sri Lanka.

The coefficient of the exchange rate (-0.000399) has a negative and statistically significant impact on FDI inflows. There is an inverse association between exchange rate and FDI inflows. This suggests that a 1 percent increase in the exchange rate can lead to nearly a 0.03 percent decrease in FDI inflows. Sri Lanka has a long exchange rate depreciation against foreign currencies which negatively influences the inflow of FDI. This result has been found in previous empirical studies by (Anna & Karambakuwa, 2012; Siddiqui & Aumeboonsuke, 2014). Trade openness and inflation have no significant influence on FDI inflows.

Table 05: Results of Error Correction Model (ECM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.022957	0.094056	0.244075	0.8090
ΔFDI (-1)	0.511290	0.165670	3.086192	0.0045
ΔGDP	0.076043	0.032638	2.329844	0.0272**
ΔINF	0.000422	0.011510	0.036662	0.9710
ΔIR (-1))	-0.174389	0.053251	3.274867	0.0028***
ΔEXR	-0.000399	0.018154	-0.022001	0.0826*
ΔTOP	0.015985	0.016144	0.990139	0.3306
ECT(-1)	-1.289023	0.241859	-5.329648	0.0000***
R-squared	0.613071			
Adjusted R-squared	0.516338			
F-statistic	6.337803			
Durbin-Watson stat	1.943738			

Note: *, **, *** indicate 10%, 5% and 1% significant levels respectively

Source: Computed in E-Views Software

Table 06: Diagnostic Test Results

Diagnostic	P-value	Results
Normality: Jarque- Bera	10.65487	Error is normally distributed
Serial correlation: Bruesch- Godfrey serial correlation LM test	0.1284	No Serial correlation
Omitted Variable: Ramsey RESET Test	0.1114	No Omitted Variables
Heteroscedasticity: White Test	0.5139	No Heteroscedasticity

Source: Computed in E-Views Software

The Error Correction Term [ECT(-1)] calculates the speediness of change between the short-run volatility and the long-run equilibrium. It has a negative sign and is statistically significant at 1 percent. The speed of 128 percent volatility in the short run will be adjusted in the long run through the exact policy reforms.

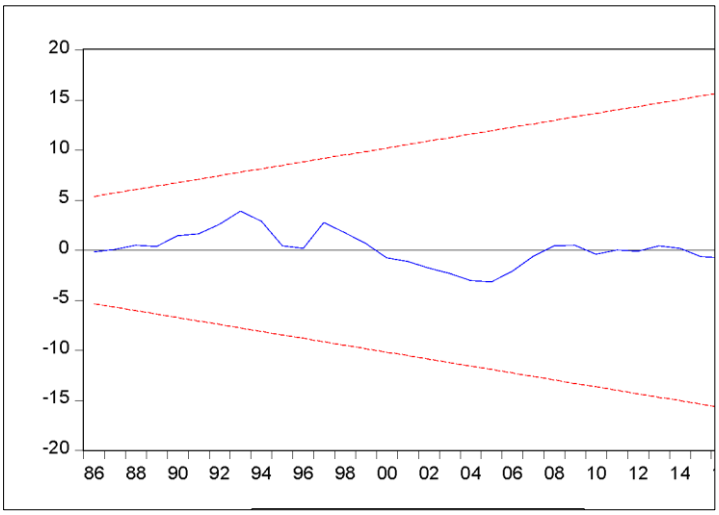


Figure 01: CUSUM Test Results

The constancy of the model was analyzed using statistics of the Cumulative Sum of Recursive Residuals (CUSUM). Statistics lie between boundary lines shown as two separate lines. Thus the null hypothesis will not be rejected. Therefore, this model was stable in 5 percent critical bounds.

5. CONCLUSION

This study intends to identify the relationships and influence of interest rates on FDI inflows in Sri Lanka by using data from 1978 to 2020. Based on the literature review this study identified that the GDP, exchange rate, interest rate, trade openness and inflation rate are five significant indicators which mostly affect the FDI inflows in Sri Lanka. In this study, ADF unit root tests proved that all the variables are stationary at the level and their first difference. It suggests that all variables are integrated with order zero and one and all lag length selection tests. Therefore, this study used the ARDL model for the analysis.

According to the bound test, F-statistics is more than the upper bound value. Therefore, this study confirmed that there is a cointegration relationship between the FDI and other explanatory variables. Long-run results show that GDP growth, trade openness and exchange rate have a significant influence on foreign direct investment inflow in Sri Lanka whereas inflation and interest rate do not affect FDI inflows. There is a positive and significant association between GDP and FDI inflows. Whereas interest rate and exchange rate have a negative and significant relationship with the FDI inflows. A negative and significant error correction coefficient (-1.289) of FDI inflows reveals that 128 percent disequilibrium is adjusted each year which implies that FDI transfers downward towards long-run equilibrium. Eventually, this study concluded long-run equilibrium among the FDI and five explanatory variables.

6. RECOMMENDATION AND SUGGESTIONS FOR FURTHER RESEARCH

This study suggests that the government of Sri Lanka has to reflect on developing a monetary policy and maintaining the balance of interest rate and exchange rate. Because of the currency depreciation, the exchange rate negatively influences FDI. The government should encourage the private sector to organize and utilize domestic resources for creative investment. Trade openness and reduction in trade barriers are significant economic policies in emerging countries like Sri Lanka, to stimulate domestic economic growth, produce employment opportunities and invent new technology through foreign direct investment. Therefore, the Sri Lankan government should implement more liberalization policies to attract foreign investment into the country.

This study contributes to the literature due to the few kinds of literature available in the Sri Lankan context. Further, this study contributes to the researcher in the way of exposing the relationship between the FDI inflows, interest rates and other control variables. This study suggests that further research be directed to incorporate human capital, innovation and technologies, political stability, money supply and so on. This will support policymakers to know the most suitable determinant to attract the FDI inflows. Researchers can perform the Granger causality test to analyze the various relationships between FDI and other macroeconomic variables.

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Department of Banking & Finance
Wayamba University of Sri Lanka

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EVALUATION ON ENTREPRENEURIAL INTENTIONS OF SRI LANKAN YOUTH GENERATION WITH SPECIAL REFERENCE TO KURUNEGALA DISTRICT

W A I Lakmal
H H B Fernando

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Abstract

Entrepreneurs are often referred to as "economic growth engines" as they can make a significant positive impact towards the social and economic development of a country. Thus, the purpose of this study was to investigate the entrepreneurial intentions of Sri Lankan youth in the Kurunegala district. The United Nations defines youth as those aged 15 to 24, and the World Health Organization recognizes this age group as the youth population. This study used the assumptions of the Theory of Planned Behavior (TPB) model to address issues of entrepreneurial intentions. Social norms, entrepreneurial education, risk-taking proclivity, and attitude toward entrepreneurship were all independent variables. Entrepreneurial intention was the dependent variable. The population consisted of 384 Kurunegala district youth associated with the entrepreneurship discipline, and they were chosen as samples using purposive sampling techniques. A self-administered, closed-ended questionnaire was used to collect data, which was then analyzed using SPSS across multiple regression tests. There was no evidence of multicollinearity or heteroscedasticity. As per the results, entrepreneurial education, and attitude towards entrepreneurship have positive and significant relationship towards entrepreneurial intention whereas only risk-taking propensity did not contribute significantly towards entrepreneurship intention. Therefore, this discovery significantly contributes to our understanding of the factors influencing young people's entrepreneurial intentions in Sri Lanka. Furthermore, given the importance of entrepreneurial education as demonstrated by this study, it is critical that the nation take the necessary steps to advance entrepreneurial education and it is suggested that the entrepreneurship curriculum for students and undergraduates place more emphasis on developing youth's entrepreneurial education and attitudes.

Keywords: Entrepreneurial Education, Entrepreneurial Intention, Risk-taking Propensity, Planned Behavior

W A I Lakmal
(Corresponding Author)
Department of Banking & Finance, Wayamba University of Sri Lanka
Email: lakmalwai@wyb.ac.lk
Tel: +94 76 4868 232
https://orcid.org/0009-0008-1845-2431

H H B Fernando
Department of Banking & Finance, Wayamba University of Sri Lanka
Email: hirunif78@gmail.com

1. INTRODUCTION

1.1 Background of the Research

Academics and policymakers have recently expressed an interest in entrepreneurship. This concern stems primarily from the growing need for entrepreneurs who can spur economic development by creating novel concepts and converting them into successful ventures. Furthermore, there is a high demand for entrepreneurs right now because many people believe it is the most effective way to get out of the current economic crisis. Entrepreneurs are often referred to as "economic growth engines." They have made significant positive contributions to a country's social and economic development. Entrepreneurship education can foster and develop young people's entrepreneurial interests. Because of this, there is general consensus regarding how crucial it is to support entrepreneurship in order to promote economic growth and job creation.

Entrepreneurial activities not only foster technological innovation; they also create job opportunities and increase competitiveness (Reynolds, 1987). Many entrepreneurs begin small and medium-sized businesses. Small and medium-sized enterprises (SMEs) account for only 80 percent of all businesses in Sri Lanka. SMEs are an important source of employment opportunities, accounting for approximately 35 percent of total employment. Inventions are also prevalent in the SME sector. Small innovative businesses are frequently fast-growing businesses that create new jobs.

One way to think about economic development in a territory is as a long-term process of sustained growth in average production per capita. In this sense, it is the result of businesses introducing innovations that allow for increased productivity, primarily technical and organizational ones. These then improve the distribution of factors used in the manufacturing process. Because of this economic function of their work, the researcher may emphasize the critical role that entrepreneurs play as development agents. Entrepreneurs, according to it, are in charge of promoting firms and enterprises; they also inject energy into local economic activity; manage organizational and technological change; and foster an environment conducive to innovation and learning. According to (Kelley et al 2010), Entrepreneurship can be a source of income when there aren't enough jobs or other options for paying wages or salaries while also adding value to society. In addition, Indarti et al., (2010) found that future aspirations to become entrepreneurs were highly impacted by a background in non-economic and business education. For a long time, many nations have considered business entrepreneurship to be one of their primary strategic priorities. Entrepreneurship is one of the main strategies for promoting economic expansion and employment creation. The major socio economic problems in developing countries are youth unemployment and poverty. In recent years, Sri Lanka's general standard of living has declined, owing primarily to citizen poverty and unemployment. The number of unemployed people in Sri Lanka increased to 419163 in the third quarter of 2022, up from 398713 in the second quarter of 2022, according to data from the Department of Census and Statistics.

The age group between 15 and 24 years is defined as a youth by the United Nations, and the World Health Organization also recognizes this age group as the youth population. The significance of youth entrepreneurship in any economy cannot be emphasized (Abubakar and Muhammed, 2018), as it is the next generation of entrepreneurs who will decide the economic sustainability of a nation. The economy can expand more quickly and unemployment is predicted to decline when young people see the benefits of entrepreneurship (Glinskiene and Petuskiene, 2011). Sri Lankans have traditionally preferred white-collar, public-sector jobs that provide a pension to the high-risk path of self-employment. According to statistics, the public sector employs one government employee for every 15 citizens. This is why push entrepreneurs are so popular. This means that people start businesses out of necessity rather than opportunity. Young people who choose to pursue self-employment through entrepreneurship have the chance to employ others in addition to themselves. One of the career options open to young people is entrepreneurship, according to (Beeka and Rimmington, 2011). Starting a business in Sri Lanka is a difficult task. The list includes funding, structuring, planning, market understanding, and so on. The success of any startup is dependent on identifying the best solution to each of these problems and confronting them head on.

There are now numerous programs available to assist startups in Sri Lanka. To assist aspirant entrepreneurs, there are 27 platforms and programs that support and mentor Sri Lankan businesses. They are as follows: Youth Business Sri Lanka (YBSL), Venture Engine, Sporulation, Crowd island, Blue Ocean Ventures, Lankan Angel Network, John Keels X, Idea2Fund, Slingshot, Startup X Foundry, Disrupt Unlimited, Lanka Ventures, East West Capital, The Emerald Fund, Browns Capital PLC, Venture Frontier Lanka, Sri Lanka Technology Incubator-Concept Nursery, Youth Hack Sri Lanka's Startup Challenge, Startup Weekend, Seed Aside from these, there is another organization known as the National Enterprise Development Authority (NEDA). NEDA promotes, encourages, and facilitates enterprise development in Sri Lanka, with a focus on the country's Micro, Small, and Medium Enterprise (MSME) sector. Despite the fact that there are numerous programs in Sri Lanka, it has been found that the general public is not very familiar with them. One of the primary causes of this is people's lack of interest in entering the entrepreneurial field due to the risk factor. Another factor is people's ignorance of the various types of business that allow them to pursue their desired career. As a result, understanding their intention is critical before taking additional actions to improve entrepreneurial intention.

1.2 Problem Statement

How to place young people in productive jobs is a major issue for developing countries, particularly Sri Lanka. Every year, a large number of young people in Sri Lanka graduate from higher education institutions without finding suitable employment. One tactic to reduce unemployment and the social problems that come with it is entrepreneurship. Economic development officials believe that encouraging an entrepreneurial culture will result in more new businesses and job growth. A postsecondary degree no longer ensures employment because of the current economic downturn and the quick advancement of technology. The government has included

courses on entrepreneurship in school and university curricula in an effort to somewhat reduce unemployment. This policy direction is likely to be infused with a deep sense of relief when it is found that entrepreneurship has the potential to generate income when an economy is unable to provide enough jobs or other alternatives for generating wages or salaries, even when positive social value exists. Additionally, it's thought that a career influenced by entrepreneurship offers a lot of chances for people to live a freer life, make more money, and contribute to economic growth, job creation, and innovation in the economy.

Despite the benefits of entrepreneurship and the availability of entrepreneurship education in Sri Lankan institutions, a large number of young people from that country are seen hopping from one location to another in search of better employment opportunities. This demonstrates that entrepreneurship engagement is more dependent on motivation than on education. This is because intentions can predict people's actions, especially when such actions are unusual, difficult to detect, or involve unpredictable time gaps. Consequently, it has been demonstrated that the most accurate indicator of entrepreneurial activity is entrepreneurial ambition. As a result, entrepreneurship education may not actually propel people into entrepreneurship unless individuals' intentions are truly evolved toward self-employment. This has prompted interested entrepreneurship researchers to focus their efforts on the factors influencing entrepreneurial intention.

One of the districts in Sri Lanka with the densest population is Kurunegala. Its population is diverse and includes a large number of young people, making it a perfect place to conduct research on adolescent entrepreneurship. When it comes to population density, Kurunegala district is ranked third out of the 25 districts. The district offers a wide variety of industries and economic activities and encompasses both urban and rural areas. This diversity can offer crucial insights into the ways in which various environments affect the entrepreneurship of young people.

The Department of Census and Statistics projects that in 2020, the unemployment rate in the Kurunegala district will be 5%. 226,632 young people between the ages of 15 and 24 are unemployed. Numerous educational facilities, including universities and career training centers, are located within the district. The availability of educational materials can impact the entrepreneurial aptitude and goals of youth. The result is that 92.7 percent of adults in Kurunegala District who are over ten years old are literate. Most people can read and write when there is a high literacy rate. It is determined by assessing a person's writing and reading comprehension. Kurunegala's road system and public transport accessibility are two major factors that affect how easy it is to establish and operate a business there. Understanding these aspects is critical for studies on young entrepreneurs. As a result, the researcher considered the Kurunegala district in order to obtain more reliable and accurate information for this study.

There are few researches conducted on the entrepreneurial intention in the Sri Lankan context. Thrikawala (2011) has analyzed the entrepreneurial intention among the academics in Sri Lanka and identified that gender, family business experience, type and year of study progremmes have had a significant impact on the entrepreneurial

intention among academics. Weerakoon and Gunatissa (2014) studied the entrepreneurial intention of undergraduates from Uva Wellassa University of Sri Lanka, and found that higher the perceived desirability and perceived feasibility higher the likelihood of entrepreneurial intention. Further, adequate statistical evidence was not found to support a significant predicting capacity of perceived social norms. Moreover, Lin, Casrud and Jagoda (2013) conducted a study on entrepreneurial intention among undergraduate business students in Sri Lanka and realized that entrepreneurial intention is positively influenced by perceived behavioral control and macro-environment support and attitudes towards entrepreneurship and subjective norms were not significantly related to intentions. Therefore, it is clear that there are few researches conducted on entrepreneurial intention in Sri Lankan context and these studies reveal different aspects about entrepreneurial intention and most of these studies are not conducted in the recent past. Thus, there is a literature gap for a study conducted in the current era in Sri Lanka.

The main research objective of this study is to examine the impact of attitude towards entrepreneurship on entrepreneurial intention of youth. And the specific research objectives are to evaluate the impact of risk-taking propensity on entrepreneurial intention of youth. To evaluate the impact of subjective norms on entrepreneurial intention of youth and to evaluate the impact of entrepreneurial education on entrepreneurial intention of youth.

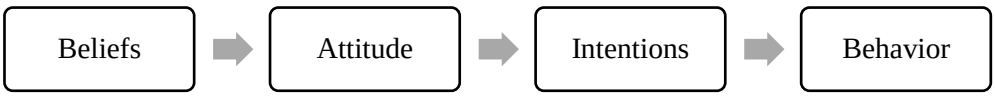
This paper further discusses the past empirical research conducted about entrepreneurial intention in the literature review followed by the methodology, data presentation, analysis and conclusion and recommendations.

2. LITERATURE REVIEW

2.1 Theoretical Literature

Ajzen (1991) proposed the Theory of Planned Behavior (TPB) as a framework for measuring global entrepreneurial intention. This is because frameworks are used differently in different contexts, topics, locations, and institutions (Fayolle, Gailly and Lassas-Clerc, 2006). The TPB, on which this study is based, asserts that the relationship between intention and behavior is influenced by attitude, subjective standards, and perceived behavioral control (Ajzen, 1991). The Theory of Planned Behavior can be used to predict a wide range of human intentions and behaviors. The psychological literature makes the assumption that the desire to start a new business is the best surrogate for characterizing entrepreneurial behavior (Souitaris, Zerbinati and Al-Laham, 2007). TPB is therefore used to express a person's intention to engage in a particular behavior, and this has been widely employed by various researchers to quantify entrepreneurial ambition. As behavior may be planned, it is believed that intention predicts a purposeful action (Abdul Kadir *et al.*, 2012). As a result, entrepreneurial behavior may not always be motivated by business interests (Garba, Kabir and Nalado, 2014). Consequently, intentions can accurately predict behavior, particularly when that behavior has some irregular lags. The real action is projected as soon as the intention is created (Bae *et al.*, 2014). In TPB, two elements that affect

intention are attitude and subjective norms. Entrepreneurship purpose is anticipated to either explain or affect the strength of these two components.



Source: The Theory of Planned Behavior (Ajzen, 1991)

2.2 Empirical Literature

2.2.1 Entrepreneurial Intention

As per Elnadi and Gheith (2023), “developing entrepreneurial intention is the first step in the entrepreneurial process since it reflects an individual's willingness and commitment to create a new business, and any more entrepreneurial moves would be impossible without it”. Further, Intention is said to be "the indication of how hard people are willing to try, of how much effort they are planning to exert, in order to perform the behavior” (Ajzen, 1991). A person is generally more likely to engage in a given behavior the stronger their intent. Because it is difficult to measure actual behavior in research, studying intention is beneficial (Lan and Wu, 2010). Entrepreneurship action and intention are strongly linked. Intention has been described as a direct predictor of behavior by (Ajzen, 1991). Entrepreneurial behavior is intentional and planned, according to (Krueger, Reilly and Carsrud, 2000). People with entrepreneurial intention were able to come up with creative ideas for starting their businesses because it was defined as "a state of mind that directed and guided the actions of the entrepreneurs in developing and implementing new business concepts." This demonstrated that people who wanted to start their own business would engage in a variety of entrepreneurial activities that could be beneficial and useful in estimating their future businesses. A person tasked with finding, investigating, and formulating a novel business idea in order to become a potentially prosperous entrepreneur and establish a company that can effectively compete with established enterprises in the market.

2.2.2 Attitude towards entrepreneurship

According to (Dewi Astuti and Martdianty, 2012), attitude is a person's positive or negative assessment of a particular behavior that is influenced by their overall behavioral beliefs. The evaluative implications of pertinent facts or beliefs that are stored in memory shape an individual's attitude. It was discovered that there was a strong positive correlation between entrepreneurship intention and attitude (Otuya. R, P and J, 2013). (Paço *et al.*, 2011) Do point out in particular that attitude really has the most significant influence in influencing entrepreneurial intention when compared to other characteristics. (Shepherd, 2002) found that people who are more likely to want to launch their own company also tend to be "more positive" about risk (i.e., less risk averse) and independence (i.e., value independence more). Therefore, people who have a strong desire to start their own business gain more freedom and suffer less from risk-related disutility. It has been established that the likelihood of that individual finding sufficiently profitable opportunities is higher (presuming a

distribution of income over opportunities for self-employment) (Shepherd, 2002). Additionally, this person will "make the jump" to working for themselves more easily. In contrast, the one who has a less optimistic outlook on independence should, given the same circumstances, wait for (less frequent) more lucrative self-employment possibilities. We developed a hypothesis to illustrate the relationship between psychological traits and entrepreneurial intention.

2.2.3 Entrepreneurship Education

A person's knowledge, which can be acquired through education, will decide how likely they are to launch their own company. An activity to develop knowledge and skills in creating knowledge and skills in managing the firm is entrepreneurship education. The practice of imparting entrepreneurial information and abilities to people allows them to take advantage of business opportunities. Entrepreneurship education involves creating knowledge and skills for business operation. The efficiency of entrepreneurial education will also influence one's level of business management scientific knowledge. You'll learn how to market your current business chances with the help of an effective entrepreneurship education. Education in entrepreneurship will also broaden each person's knowledge on how to generate business ideas. So, the degree of entrepreneurial education's effectiveness will have an effect on that intention. Developing a passion and a range of skills in young people is the aim of entrepreneurial education. Its goal is to guide the business successfully from its inception to maturity while reducing the risk associated with entrepreneurship.

Research on entrepreneurship education revealed that people are more likely to pursue opportunities for self-employment when they are exposed to information about beginning a business (Frank, 2007). It is essential to provide opportunities for entrepreneurship education and skill development in order to support the desire to engage in entrepreneurial activities. Entrepreneurial education and intentions examined the overall effects of entrepreneurial education on intention and assessed whether students' entrepreneurial ambitions were higher or lower before or after taking an entrepreneurship course or program. (Neck and Greene, 2011) “Our purpose was to acknowledge that we teach in several different worlds. Many teach in more than one world, but the environment for entrepreneurship is changing whereas education for entrepreneurship is not”.

2.2.4 Subjective Norms

Subjective norm is another social factor that precedes intention. According to the (Ajzen, 1991), subjective norm describes “perceived social pressure to engage or not to engage in behavior”. According to (Engle *et al.*, 2010), the terms "social norm" and "subjective norm" refer to the social pressure that comes from people's parents, friends, partners, or other significant roles. The relationship between social norm and entrepreneurial intention has been the subject of contentious research in the past. (Van Gelderen *et al.*, 2008) discovered that social norms had a significant role in describing intention toward entrepreneurship; they also emphasized the good social norm that students with entrepreneurial family members and friends possessed. Positive relationships between social norm and entrepreneurial intention have also been found

by (Carr and Sequeira, 2007). The strong social pressure to engage in a specific behavior is known as the subjective norm (Ajzen, 1991). It's the knowledge that friends, relatives, and coworkers have about the particular behavior in question. Perceived social desirability is another term for subjective norm (Neck and Greene, 2011). An entrepreneur is more likely to engage in entrepreneurial activity if there are more people in their social network who support their decision to become an entrepreneur (Angriawan *et al.*, 2012). According to this study, there is a strong positive correlation between entrepreneurial intention and subjective norms.

2.2.5 Risk taking propensity

In the world of entrepreneurship, taking calculated risks is the newest tactic. Taking a risk could lead to achievement or disappointment. As a result, before making a decision, business owners should consider the risks involved as well as the advantages and disadvantages of taking calculated risks at every stage of their enterprise. For entrepreneurs, taking risks is more acceptable than for others. One of the most important traits of successful entrepreneurs is risk tolerance. Entrepreneurs take financial, reputational, family, and career risks when they decide to start their own businesses. Risk-takers might want to start their own businesses and pursue entrepreneurial goals. Several empirical studies have shown that a key component of understanding an entrepreneur is their inclination to take risks. (Gürol and Atsan, 2006); (Relationship and Marino, 2008); (Verheul, Stel and Thurik, 2006). They found that a person's propensity for taking chances significantly influences their entrepreneurship. having the capacity to control risk and uncertainty and to be ready to handle them. Risk-takers are capable of making choices that have a lower likelihood of success but nevertheless turn out well. When things are unclear, they are more willing to make decisions. Entrepreneurs run a number of risks to their personal relationships, reputation, money, and careers. A person with a desire to succeed in business should be somewhat risk averse. More risks are taken by entrepreneurs than by others, according to several studies (Ahmed, 1985); (Meyer, Walker and Litwin, 1961).

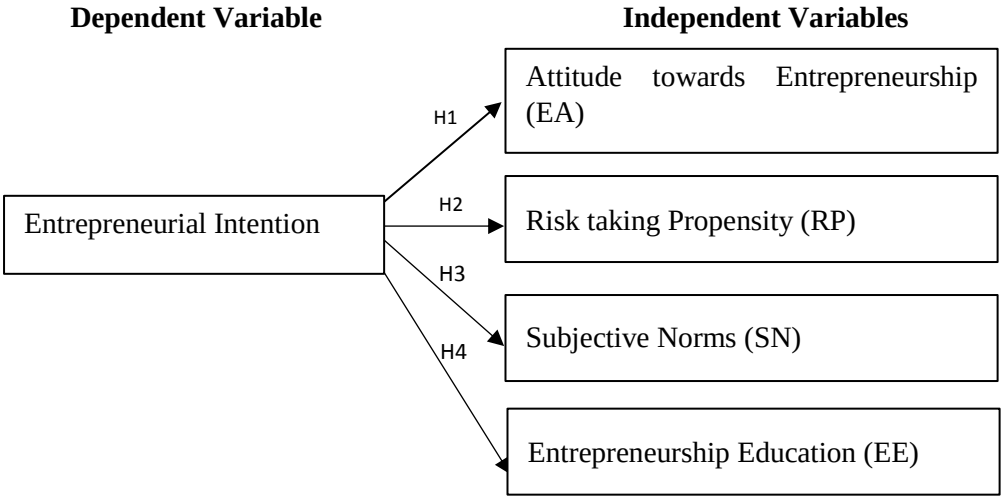
3. METHODOLOGY

The research logic that outlines the procedures required to conduct a project in detail is known as research design. This study used a quantitative methodology. The research entails the definition and examination of correlations between dependent and independent variables using an objective, formal, and logical process. This strategy was adopted and used as a result of the particular benefits it provides, namely that it is simple, time-saving, and affordable. A deductive approach is a method of reasoning that starts with a general premise or set of premises and ends with a particular conclusion. In deductive reasoning, if the premises and the logical framework are true, then the conclusion must also be true. It is a top-down method where predictions or precise conclusions are made using a broad assertion or hypothesis. This study used a survey approach to gather data from the target group through the use of a structured, self-administered questionnaire. Since the data was gathered all at once, a cross-sectional research design was used. Finding potential target populations for support and intervention may be aided by this. The youth in the Kurunegala district

serve as the study's analytical unit. They may be employed or unemployed youth. According to the United Nations report on Unlocking the Potential of Youth (2016), there are around 4.64 million youth in Sri Lanka. In Kurunegala district, there are around 220,000 youths. So, according to the Morgan table, the sampling size set by the researcher is around 384. Purposive sampling technique was chosen as the method of data collection.

3.1 Conceptual Framework

The theory of planned behavior proposes two conceptually distinct variables as the primary determinants of entrepreneurial intent: attitude toward the conduct and subjective norms. A thorough review of the literature finds a paucity of empirical studies examining the relationship between entrepreneurial education, subjective norms, risk-taking propensity, and attitude among young people in Sri Lanka. The conceptual paradigm shown in Figure 3 was consequently proposed.



Source: Author Developed

Figure 1: Conceptual Framework

3.2 Formation of Hypotheses

Researcher tests the entrepreneurial intention by formulating the hypotheses which are based on the research objectives, theoretical and empirical foundation.

H_1: there is a significant impact of attitude towards entrepreneurship on entrepreneurial intention of the youth

H_2: there is a significant impact of risk-taking propensity on entrepreneurial intention of the youth

H_3: there is a significant impact of subjective norms on entrepreneurial intention of the youth

H_4: there is a significant impact of entrepreneurship education on entrepreneurial intention of the youth

Table 3.1: Operationalization Table

Factor	Measurement indicator	Source
Entrepreneurial Intention	Entrepreneurial readiness Professional goal Effort to start and run a firm Intention to create a firm in the future Thought about starting a firm	Línãn & Chen (2009), Dinis et al. (2013)
Subjective Norm	People's opinion about the acceptance of starting own business The culture towards entrepreneurial activity Support of family start own business Opinion about the entrepreneur's role in the economy in the country Believe of the closest family about pursue a career as an entrepreneur.	Heuer and Kolvereid, 2014); Liñán, Urbano and Guerrero (2011)
Risk taking Propensity	Intention about try new things Intention about using new routes when traveling Have taken a risk in the last six months. Intention about starting a business if there is a risk it might fail Concern about risk of failure	Keong, L. C. (2008) Verheul et al (2006)
Entrepreneurial Attitude	Intention about being own boss than have a secure job. Intention about making money if you are self-employed. Intention about forming a new company than be the manager of an existing one Willingness to the challenge of creating a new business. Intention about making money.	Línãn & Chen (2009)
Entrepreneurship Education	Place for learn about starting a business Inspiration of a creative university/school environment to develop ideas for new business Encouragement of university/school to pursue business ideas Importance of entrepreneurial courses/subjects in order to stimulate entrepreneurial spirit Help of education programs to start own business	Keat, Selvarajah and Meyer (2011)

4. DATA PRESENTATION AND ANALYSIS

4.1 Description of the Actual Sample

394 questionnaires were collected and 384 sets of questionnaires were successfully used in this study. Out of the 384 respondents, 206 are male (53.6 Percent), 178 are

female (46.4 Percent), and 384 (100 Percent) of them are between the ages of 15-24 years. Work experience among respondent's accounts for 280 (72.9 Percent) while respondents with no work experience accounts for 104 (27.1 Percent). Respondents that once owned a self-business are 109 (28.4 Percent) and those that do not are 275 (71.6 Percent).

4.2 Examining the Data

The validity and reliability of the questionnaire were not examined in this study because it was created using data from earlier research. In the previous studies, Cronbach's alpha value of all the variables above than 0.7. Also, the validity has been measured through Kaiser-Meyer Measures and Bartlett's Test.

4.2.1 Normality Testing

Table 4.1 provides the skewness and kurtosis statistics. Low values of skewness and kurtosis signify trends toward normality, while high values imply non-normality. In this instance, the values of skewness and kurtosis are always between -1.96 and +1.96, showing that neither extreme tilts to the right or left exist in the distribution of score from answers. As a result, we can say that the normality assumption is true.

Table 4.1: Statistics on Skewness and Kurtosis

	Skewness		**Kurtosis**	
	Statistic	**Std. Error**	**Statistic**	**Std. Error**
Entrepreneurial Intention	-0.177	0.125	0.068	0.248
Subjective Norms	0.276	0.125	-0.403	0.248
Entrepreneurship Education	0.052	0.125	-0.257	0.248
Risk Taking Propensity	-0.131	0.125	0.484	0.248
Attitude Towards Entrepreneurship	0.155	0.125	-0.417	0.248

Source: Research Data

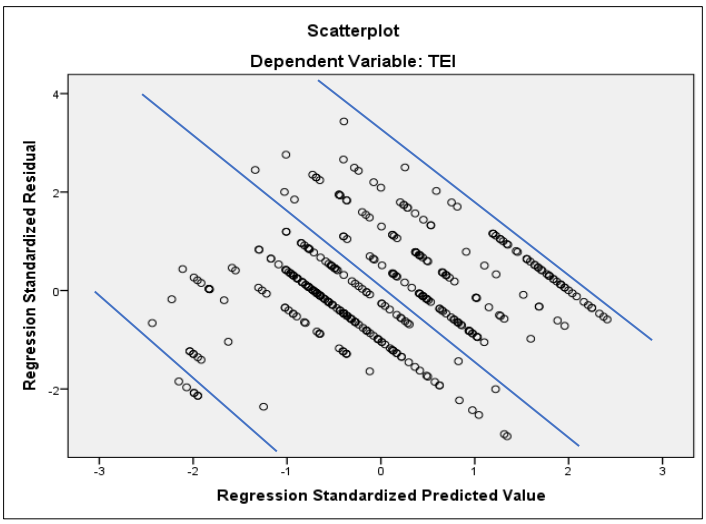
4.2.2 Linearity Testing

A linear regression model assumes that the average outcome is linearly connected to each term when all other terms in the model are held constant. The linearity test is a statistical technique used to determine whether a relationship between two variables is linear. When all other terms in the model are held constant in linear regression, the average outcome is assumed to be linearly related to each one. Linearity can be tested using SPSS's linearity test. The p values are all less than 0.05. As a result, all of the values in the above table are significant. As a result, the linearity assumption is satisfied.

Table 4.2: Testing linearity

			Sum of Squares	df	Mean Squares	F	Sig.
TEI*TSN (Entrepreneurial Intention and Subjective Norms)	Between Groups	(Combined)	32.085	10	3.208	26.861	.000
		Linearity	29.206	1	29.206	244.514	.000
		Deviation from Linearity	2.878	9	.320	2.677	.005
	Within Groups		44.554	373	.119		
	Total		76.638	383			
TEI*TEE (Entrepreneurial Intention and Entrepreneurship Education)	Between Groups	(Combined)	40.882	10	4.088	42.646	.000
		Linearity	33.407	1	33.407	348.491	.000
		Deviation from Linearity	7.474	9	.830	8.663	.000
	Within Groups		35.757	373	.096		
	Total		76.638	383			
TEI*TPR (Entrepreneurial Intention and Risk Taking Propensity)	Between Groups	(Combined)	31.876	12	2.656	22.016	.000
		Linearity	26.070	1	26.070	216.070	.000
		Deviation from Linearity	5.806	11	.528	4.375	.000
	Within Groups		44.762	371	.121		
	Total		76.638	383			
TEI*TEA (Entrepreneurial Intention and Entrepreneurship Attitude)	Between Groups	(Combined)	47.330	10	4.733	60.235	.000
		Linearity	43.609	1	43.609	555.000	.000
		Deviation from Linearity	3.721	9	.413	5.262	.000
	Within Groups		29.308	373	.079		
	Total		76.638	383			

4.2.3 Testing Homoscedasticity



Source: Research Data

Figure 2: Scatterplot

The homoscedasticity assumption—literally, "same variance"—lays the groundwork for linear regression models. The condition is called homoscedastic when the error term remains constant across all values of the independent variable. Heteroscedasticity, or the breach of homoscedasticity, occurs when the error term's magnitude fluctuates across values of an independent variable. The effects increase with increasing heteroscedasticity, depending on how much the homoscedasticity assumption is broken. The scatterplot indicates that the dependent variable's variance is constant across the independent variable's value range. Thus, the assumption of homoscedasticity can be said to be true.

4.2.4 Multicollinearity Testing

Table 4.3 shows that, all independent factors had statistically significant impact on youth's entrepreneurial intention, with 0.000 p-values for all variables at the 0.01 level of significance. The findings showed that there is moderate strength of link between Subjective Norms, Entrepreneurial Education, and Risk-Taking Propensity and Entrepreneurial Intention, with R-values of 0.617, 0.660, and 0.583 respectively and there is a high strength of link between Attitude Towards Entrepreneurship and entrepreneurial Intention with R-value 0.754. Therefore, hypothesis 1, 2, 3 and 4 are accepted as influencing factors that contribute to youth's entrepreneurial intention. Also, we can conclude that there are positive relationships between the dependent variable and all the independent variables. Since none of the study variables in table 4.7 below have a correlation value of greater than 0.9, multicollinearity is disregarded. Hence, the multi-regression analysis can be carried out.

Table 4.3: Summary of Pearson Correlation

	EI	SN	EE	RP	EA
EI	1				
SN	0.617**	1			
EE	0.660**	0.663**	1		
RP	0.583**	0.462**	0.596**	1	
EA	0.754**	0.473**	0.591**	0.606**	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).
EI = Entrepreneurial Intentions; SN = Subjective Norms; EE = Entrepreneurial Education; RP = Risk Taking Propensity; EA = Entrepreneurial Attitude

Source: Research Data

Table 4.4: VIF and Tolerance Values for Multicollinearity test

Variables	Tolerance values	VIF
Subjective norms	0.548	1.825
Entrepreneurial education	0.423	2.365
Entrepreneurial attitude	0.543	1.841
Risk taking propensity	0.545	1.834

Source: Research Data

It is vital to validate the key assumptions of the linear regression model (collinearity) before delving into the significance of the regression coefficients. These assumptions are related to the dependent variable and independent variables and to the relationship as a whole. A number of collinearity statistics, including the tolerance, and variance inflation factor, are presented in Table 4.6 for the independent variables. The tolerance values range between 0.423 and 0.548; these are well above the threshold value of 0.1, below which the presence of a multicollinearity problem is indicated. To have a multicollinearity free data the VIF must be not up to 10 (Hair et al., 2010). When the VIF is <10 the result is considered acceptable.

4.3 Descriptive Analysis

A descriptive analysis of the study constructs is shown in Table 4.7 to provide a general overview of them and all constructs are viewed favorably by respondents. It shows descriptive statistics of the lists of the parameters including entrepreneurial intention, subjective norms, entrepreneurship education, risk taking propensity, and entrepreneurial attitude. The overall mean score for each element was examined using the summated mean score. The findings revealed that subjective norms had the lowest mean score (M=3.9526) and entrepreneurial intention had the highest mean score (M=4.2646). Among the independent variables, risk taking propensity, entrepreneurship education, entrepreneurial attitude has mean scores of 4.0573, 4.0583 and 4.1625 respectively.

Table 4.5: Descriptive Statistic

Variables	Minimum	Maximum	Mean	Stand. Dev.
Entrepreneurial intention	3.00	5.00	4.2646	0.44733
Subjective norms	3.00	5.00	3.9526	0.46647
Entrepreneurship education	3.00	5.00	4.0583	0.47839
Risk Taking Propensity	2.20	5.00	4.0573	0.45134
Entrepreneurial Attitude	3.00	5.00	4.1625	0.43122
Sample	384			

Source: Research Data

Table 4.6: Model summary indicators

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.822[a]	0.675	0.672	0.25631	1.842

Predictors: (Constant), RP, SN, EA, EE
Dependent Variable: EI

Source: Research Data

Table 4.6 provides a Durbin-Watson indicator that can be used to assess the independence of residuals. The Durbin-Watson statistically in the range of 0 - 4. A value of 2 or nearly 2 indicates that there is no first-order autocorrelation. An acceptable range is 1.50 – 2.50. where successive error differences are small, Durbin-Watson is low (less than 1.50); this indicates the presence of positive autocorrelation.

Since this indicator's value (1.842) exceeds its greatest critical value in accordance with the decision rule, we also get to the conclusion that there is no autocorrelation among the residuals because they are independent. Because the assumptions of multicollinearity and independence of residuals were successfully tested, the linear regression model can be used to investigate the links between the dependent and independent variables. Additionally, Table 4.6 displays the summary indicators for R, R^2, adjusted R^2, and the regression's standard error. R^2 and adjusted R^2 values of 0.675 and 0.672 show that the independent variables account for nearly 67% of the variance in entrepreneurial intention.

Table 4.7: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	51.740	4	12.935	196.890	0.000[b]
Residual	24.899	379	0.066		
Total	76.638	383			

Predictors: (Constant), RP, SN, EA, EE
Dependent Variable: EI

Source: Research Data

The outcomes of the ANOVA regression analysis in Table 4.7 further offer confirmation of the regression model's strong predictive power. With 383 degrees of freedom (4 from the regression and 379 from residuals), the F statistic is 196.890, and the entire regression is significant at the 0.01 level (p-value =0.000 < 0.01). As a result, the null hypothesis is disproved, and each regression coefficient is not equal to zero.

Table 4.8: Coefficients

Model	Unstandardized Coefficient		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	0.287	0.145		1.981	0.048
SN	0.229	0.038	0.239	6.036	0.000
EE	0.152	0.042	0.163	3.615	0.000
EA	0.520	0.041	0.502	12.651	0.000
RP	0.071	0.039	0.072	1.809	0.071

($p < 0.05$), Dependent variable: Entrepreneurial Intention

Source: Research Data

Table 4.8 showed that subjective norms, entrepreneurial education, and attitude towards entrepreneurship have positive and significant relationships towards entrepreneurial intention ($\beta = 0.239$, $p < 0.01$; $\beta = 0.163$, $p < 0.01$; $\beta = 0.502$, $p < 0.01$). However, the detailed examination of the individual factors revealed that only one factor (risk-taking propensity) did not contribute significantly towards entrepreneurship intention ($\beta = 0.072$, $p = 0.071$) Following the results, it is possible to rewrite the linear regression equation with the dependent variables as Entrepreneurial Intention as follows.

$$\mathbf{EI = 0.163\ EE + 0.239\ SN + 0.502\ EA}$$

The equation shows that all standardized coefficients of variables are greater than 0 with $p<0.05$. This demonstrates that four independent variables have a positive relationship with entrepreneurial intention.

4.4 Hypotheses Testing

Research Hypotheses	Hypotheses Accept/ Reject
H_1: there is a significant impact of attitude towards entrepreneurship on entrepreneurial intention of the youth	Accepted
H_2: there is a significant impact of propensity to take risk on entrepreneurial intention of the youth	Rejected
H_3: there is a significant impact of subjective norms on entrepreneurial intention of the youth	Accepted
H_4: there is a significant impact of entrepreneurial education on entrepreneurial intention of the youth	Accepted

5. CONCLUSION AND RECOMMENDATION

Youth entrepreneurship has become a hot topic among policymakers, educators, and students in the majority of developing countries due to the importance of the young in supporting the nation's economy. The purpose of this study is to assess the factors that influence Sri Lankan youth involvement in entrepreneurship, such as attitude toward entrepreneurship, risk-taking proclivity, subjective norms, and entrepreneurship education. After analyzing 384 sample units from the Kurunegala district's youth, it was discovered that attitude toward entrepreneurship, subjective norms, and entrepreneurship education have a significant effect on youth entrepreneurial intention. However, this study found that risk-taking proclivity has no effect on entrepreneurial intention. According to the survey, the most important factor influencing Sri Lankan youth to engage in entrepreneurship is their attitude toward entrepreneurship. Furthermore, this study demonstrated how subjective norms influence someone's desire to start their own business. The study discovered that respondents' entrepreneurial goals were influenced by the support of their family, friends, and culture, according to subjective norms.

Most importantly, this study empirically validates the TPB's applicability in Sri Lanka to explain the entrepreneurial inclinations of Sri Lankan youth. Furthermore, given the importance of entrepreneurial education as demonstrated by this study, it is critical that the nation take the necessary steps to advance entrepreneurial education. Because the study's findings showed that attitude and entrepreneurial education have a significant positive impact on entrepreneurial intention, it is suggested that the entrepreneurship curriculum for students and undergraduates place more emphasis on developing youth's entrepreneurial attitudes. Instead, the curriculum should focus on ways to help the next generation of entrepreneurs become more adept at starting their own businesses and raising their subjective standards through the development of

club and group business ideas. According to the research implication, it is recommended that,

I. Creating a distinct curriculum for entrepreneurship education in schools and universities.
II. Deliver classes and seminars in schools and universities.
III. Including more practical activities, such as field trips, to identify the current market environment and market opportunities.
IV. Giving priority to new product and service innovations in entrepreneurship courses over theoretical concepts.
V. Encouraging young people who are already self-employed to expand their businesses.
VI. Monitor youth business start-ups to some extent until they become market-stable.

A mentor-mentee program could be established in addition to the above recommendation, in which mentors would assist their young mentees in setting career goals and implementing the necessary steps to achieve those goals, while also leveraging their personal networks to get involved in assisting their mentees in locating entrepreneurial opportunities. Look for a mentor with knowledge of risk management who can assist people and provide insightful advice if at all possible. Current events that may have an impact on risk, such as political upheaval, economic trends, and technological changes, should be monitored. It is critical to understand how these factors influence risk. A program like this could help identify and support potential young entrepreneurs. According to a study by (Otuya. R, P and J, 2013), entrepreneurship awareness should be promoted in the early years of education so that by the time students reach secondary school, they have developed the necessary entrepreneurial traits. Because the findings of this study only represent a small portion of the Sri Lankan youth population, it is recommended that additional research be conducted in an effort to include all Sri Lankan districts in order to investigate additional factors that may influence young people's involvement in entrepreneurship.

Comprehending the extent and present state of entrepreneurial aspirations among Sri Lankan youth could offer policymakers and educational establishments a chance to devise inventive approaches to enhance these economies. A deeper comprehension of the relationship between entrepreneurial education and entrepreneurial intention is offered by the study. In the academic context of the study, it was found that students' intentions to start their own business were influenced by their education. It is imperative to find ways to launch and expand the educational system and encourage students' and graduates' entrepreneurial spirit in order to lower the nation's currently high unemployment rates. Campaigns for public entrepreneurship should be given high priority by governments and legislators. Even during open political campaigns, they need to spread awareness about the importance of entrepreneurship among diverse communities, including students. Politicians need to realize that promoting entrepreneurship never amounts to a waste of money; rather, it ensures the economic

advancement of a nation. Entrepreneurship education should be supported in the country by three pillars: industry, academia, and public policy, which includes the government and government agencies, and funds should be obtained to support these linkages. Such campaigns should include the allocation of resources to students for start-up businesses through various government agencies. The research was able to provide a picture of youth entrepreneurial intentions due to its location within a quantitative research paradigm. A qualitative or longitudinal study could be used in future research to better understand youth entrepreneurial intentions. Researchers could also look into other factors that influence entrepreneurial intent.

6. LIMITATIONS OF THE STUDY

There are some limitations, so proceed with caution when evaluating the results. For starters, there are sample size constraints. The sample size for the study was 384 people. Furthermore, the sample was only taken from the Kurunegala district of Sri Lanka. As a result, this survey represents only a small portion of the population and may not accurately represent all young people in Sri Lanka. Although respondents were drawn from the Kurunegala district to represent the Sri Lankan youth population, entrepreneurial intentions in other districts may differ from those in Sri Lanka due to cultural differences and other environmental factors. As a result, the study's findings cannot be generalized to represent the purpose in other contexts. This study did not include all of the variables that could influence an individual's decision to start a business. The results show that the R-square is 0.672, indicating that 67 percent of the variables influence entrepreneurial intention. As a result, the characteristics that were not studied in this study may have an impact on the conclusion (influencing the intention to start a business) depending on the culture where the sample is based.

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